

Final

**Wing Infrastructure Development
Outlook (WINDO) Plan
Environmental Assessment**



Langley Air Force Base, Virginia

**U.S. Air Force
Air Combat Command
1st Fighter Wing**

August 2005

Report Documentation Page			Form Approved OMB No. 0704-0188		
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE 31 AUG 2005		2. REPORT TYPE Environmental Assessment		3. DATES COVERED 00-00-2004 to 00-00-2005	
4. TITLE AND SUBTITLE Wing Infrastructure Development Outlook (WINDO) Plan Environmental Assessment (EA) Langley AFB, Virginia			5a. CONTRACT NUMBER W9126G-04-F-0199		
			5b. GRANT NUMBER		
			5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S) David Dischner; Lorraine Gross; David Lingner; Kathleen Sherwood; Howard Rock			5d. PROJECT NUMBER		
			5e. TASK NUMBER		
			5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Science Applications International Corporation (SAIC), 816 State Street, Suite 500, Santa Barbara, CA, 93101-3256			8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Army Corps of Engineers - Ft. Worth District, Contracting Division, 819 Taylor Street, Room 2A19, P.O. Box 17300, Fort Worth, TX, 76102-0300			10. SPONSOR/MONITOR'S ACRONYM(S) USACE		
			11. SPONSOR/MONITOR'S REPORT NUMBER(S)		
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES The original document contains color images.					
14. ABSTRACT This EA describes the potential environmental consequences of five proposed projects within the WINDO at Langley AFB. Projects include the relocation of the government fuel station, alert area expansion, visitors' quarters construction, relocation of the explosive ordnance disposal training range, and construction of parking for WRM and ACCRSS facilities. Ten resource categories received a thorough evaluation to identify potential impacts. An increase to safety risks during demo and construction would be mitigated by employing standard safety practices. Any noise associated with work at these sites would be temporary and limited to daytime hours. These actions would have the potential to disturb portions of various ERP sites; a waiver from ACC would be necessary, which would identify appropriate control measures. These actions would be consistent with the base General Plan, and any transportation impacts resulting from increased truck traffic would be minor. Interruption of utilities and other infrastructure due to demo and construction activities would be temporary. Air Quality, Cultural Resources, Water Resources, Biological Resources, and Socioeconomics would not be significantly affected by this action. No long term environmental consequences are anticipated.					
15. SUBJECT TERMS Wing Infrastructure Development Outlook (WINDO) Plan Environmental Assessment					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT 1	18. NUMBER OF PAGES 214	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

ACRONYMS AND ABBREVIATIONS

1 FW	1st Fighter Wing	NASA	National Aeronautics and Space Administration
ACC	Air Combat Command	NAAQS	National Ambient Air Quality Standards
ACCRSS	ACC Regional Supply Squadron	NEPA	National Environmental Policy Act
ACHP	Advisory Council on Historic Preservation	NEW	Net Explosive Weight
ACM	Asbestos-Containing Materials	NFPA	National Fire Protection Agency
ADP	Area Development Plan	NHPA	National Historic Preservation Act
AFB	Air Force Base	NRHP	National Register of Historic Places
AFH	Air Force Handbook	OSHA	Occupational Safety and Health Administration
AFM	Air Force Manual	P.L.	Public Law
AFI	Air Force Instruction	PM ₁₀	particulate matter equal to or less than 10 micrometers in diameter
AFOSH	Air Force Occupational Safety and Health	PM _{2.5}	particulate matter equal to or less than 2.5 micrometers in diameter
Air Force	United States Air Force	PP	Proposed Plan
APZ	Accident Potential Zone	Q-D	Quantity-Distance
AQCR	Air Quality Control Region	RA	Remedial Action
AST	above-ground storage tank	RACR	Remedial Action Completion Report
CAA	Clean Air Act	RCRA	Resource Conservation and Recovery Act
CEQ	Council on Environmental Quality	RI	Remedial Investigation
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act	ROD	Record of Decision
CFR	Code of Federal Regulations	ROI	region of influence
CRMP	Cultural Resource Management Plan	RUL	Remaining Useful Life
CWA	Clean Water Act	SHPO	State Historic Preservation Office
CZMA	Coastal Zone Management Act	SIP	State Implementation Plan
dba	decibel, A-weighted	SR	State Route
DCR	Department of Conservation and Recreation	SWPPP	Stormwater Pollution Prevention Plan
DDESB	Defense Department Explosives Safety Board	TO	Technical Order
DNL	Day-Night Average Sound Level	U.S.	United States
DoD	Department of Defense	UFC	Unified Facilities Criteria
EA	environmental assessment	USACE	United States Army Corps of Engineers
EIAP	environmental impact analysis process	USC	United States Code
EO	Executive Order	USEPA	U.S. Environmental Protection Agency
EOD	Explosive Ordnance Disposal	USFWS	United States Fish and Wildlife Service
EPCRA	Emergency Planning and Community Right-to-Know Act	UPH	Unaccompanied Personnel Housing
ERP	Environmental Restoration Program	UST	underground storage tank
ESA	Endangered Species Act	VAC	Virginia Administrative Code
FONSI	Finding of No Significant Impact	VDEQ	Virginia Department of Environmental Quality
FS	Feasibility Study	VDHP	Virginia Department of Historic Resources
FY	Fiscal Year	VOC	volatile organic compound
HRSD	Hampton Roads Sanitation District	VPDES	Virginia Pollutant Discharge Elimination System
HTA	Heavier Than Air	WINDO	Wing Infrastructure Development Plan
LTA	Light Than Air	WRM	War Resource Material
MFH	Military Family Housing	WTP	Water Treatment Plant
MGD	million gallons per day		
MSL	mean sea level		
MVA	megavolt amp		

FINDING OF NO SIGNIFICANT IMPACT/ FINDING OF NO PRACTICABLE ALTERNATIVE

NAME OF THE PROPOSED ACTION

Langley Wing Infrastructure Development Outlook (WINDO) Plan at Langley Air Force Base (AFB), Virginia.

DESCRIPTION OF THE PROPOSED ACTIONS AND ALTERNATIVES

1st Fighter Wing (1 FW) located at Langley Air Force Base (AFB) proposes to upgrade facilities and services associated within the WINDO Plan within the confines of Langley AFB. This development plan contains five projects as described below:

Government Fuel Station Relocation. This proposed action relocates the government gas and diesel refueling station adjacent to Facility 322, just south of Beech Avenue. This relocation will include new pavement, piping, electrical systems, and landscaping with a berm to buffer the station from Beech Avenue. An alternative location would be to relocate the government gas station to the 1300 Area on the north side of the base.

Alert Area Expansion. The proposed action is to expand the 119th Fighter Squadron compound to an area southwest of Lee Road and northwest of the Northeast-Southwest Runway. This project includes expansion of the alert area ramp, taxiway repair, addition of perimeter security, and replacement of the alert hangar roof and doors. There are two alternatives to the proposed action. Alternative One would be to close, relocate, and/or declassify the Juliet Taxiway. Alternative Two would be to operate the 119th Fighter Squadron at the West Ramp instead of constructing an expanded new alert ramp.

Visitors' Quarters Construction. The proposed action is construction of 4-story Visitors' Quarters building and an adjacent parking area on the northeast corner of Nealy Avenue and Tuskegee Airmen Boulevard. Demolition of Buildings 74 and 75, existing asphalt paving, concrete walkways, and all existing underground utilities are also included in the proposed action. The one alternative to the proposed action would be to construct the new Visitors' Quarters east of the B-52 static display off of Nealy Avenue, near the main gate.

Explosive Ordnance Disposal (EOD) Training Range Relocation. The proposed action is to relocate the EOD Training Range to the North Base Industrial Area, just south of the Munitions Storage Area on the east side of Gregg Road. An access road would be built from Gregg Road, bypassing wetlands, to the detonation area. No alternatives to the proposed action have been identified.

War Reserve Material Group (WRM) and Air Combat Command Regional Supply (ACCRSS) Parking Area Construction. The proposed action is to construct a parking area south of Beech Avenue and north of Sweeney Boulevard near the WRM and ACCRSS facility. A pedestrian bridge would be constructed over the existing creek and two entrance/exits onto Sweeney Boulevard would be included. No alternatives to the proposed action have been identified.

SUMMARY OF ENVIRONMENTAL CONSEQUENCES

This Environmental Assessment (EA) analyzes the impacts associated with construction, demolition, renovation, and relocation related to the five projects contained within the WINDO Plan. This EA evaluates the proposed actions, alternatives, and the No-Action Alternative for each project. Ten resource categories received thorough evaluation to identify potential environmental consequences. As indicated in Chapter 4.0, the proposed actions, their alternatives, or the No-Action Alternative would not result in any significant impacts to any resource category.

Land Use, Transportation, and Visual Resources: Construction, demolition, and renovation associated with the proposed actions or alternatives would be consistent with base plans and zoning. The proposed action and the alternatives would, as a matter of comity, be conducted as much as possible so as to be consistent with the Chesapeake Bay Preservation Act and with the goals of the Coastal Zone Management Act (CZMA). Standard construction practices would be included in the project construction and demolition to reduce the potential for soil erosion into the Chesapeake Bay watershed. No conflicts with existing on-base land uses would result from the construction. The existing government fuel station cannot accommodate additional expansion, it does not meet force protection setback requirements, and relocation would alleviate these situations. The alternative site location for the Government Fuel Station has been identified for light industrial land use. As for the EOD Range, access to Gregg Road would be restricted in the area of the range when the range is active. An access road would be required from the closed access point to the detonation point within the range. This road would be closed to traffic during EOD activities. Construction, demolition, and renovation associated with proposed actions or alternatives would cause minor effects upon transportation by causing minor changes to on-base vehicular circulation. The contractor will provide signage and detours during construction/demolition to maintain access to affected areas.

Socioeconomics: A short-term, positive input into the regional economy would occur during the construction periods of the proposed action or the alternatives. The regional economy would be capable of absorbing the short-term beneficial gain resulting from the construction/demolition associated with the WINDO projects and their alternatives.

Infrastructure: Construction and demolition activities could result in some temporary interruption of utility services. These impacts would be temporary, occurring only for the duration of the construction and demolition period. In general, infrastructure on Langley AFB would improve under the implementation of the proposed actions. New facilities and associated utility upgrades would enhance the existing base operations.

Cultural Resources: Surveys of Langley AFB have resulted in no identification of archaeological resources in the WINDO project areas or their alternative locations. None of the WINDO projects are located within the National Register of Historic Places (NRHP)-eligible Langley Field Historic District. A recent report evaluated the Alert Hangar (Building 1362) as eligible for the NRHP because of its association with the Cold War Era. To comply with Section 106 of the NHPA, Langley AFB and the Virginia SHPO have executed a Memorandum of Agreement with stipulations regarding renovations to the Alert Hangar. These actions include finalizing the draft

report, Historic Evaluation Buildings 351 and 1362, Draft (Air Force 2004b); completion of additional recording forms for the SHPO; submittal of a complete set of full-size drawings of the hangar and review of these materials; and provision of reports, drawings and forms to the SHPO, the Office of the Command Historian, HQ ACC, and the U.S. Air Force Historical Research Agency at Maxwell AFB, Alabama. In addition, Langley AFB will include the Alert Hangar in the revised Langley AFB Cultural Resources Training video, and will highlight the hangar in its annual Historic Preservation Week activities.

Biological Resources: Construction activities associated with the WINDO projects, as detailed within the proposed action or alternatives, would have no adverse consequences to individual species or native plants or animals at the proposed action or alternative sites since the only plant or animal species likely to be displaced from the location's marginal habitat are individuals of common and locally abundant species. A joint permit would be obtained by the contractor for construction of the pedestrian bridge in the wetlands associated with the WRM/ ACCRSS Parking Area project. Construction would occur in accordance with the requirements contained in that permit. No threatened, endangered, or special species/communities would be adversely affected by the proposed actions or their alternatives. Incidentally occurring listed, proposed, or candidate species are not likely to be adversely affected since there are no designated critical habitats on Langley AFB.

Water Resources: Construction and demolition associated with proposed actions and their alternatives would not be expected to significantly affect the water quality of the Back River and Chesapeake Bay. Prior to the start of construction or demolition, silt fences, storm drain inlet and outlet protection, and other standard construction practices would be initiated in accordance with the requirements contained in the Virginia Erosion and Sediment Control Handbook. Because more than 1 acre would be disturbed by construction/demolition associated with each project and its alternatives, a Virginia Pollutant Discharge Elimination System (VPDES) Storm Water Control Permit would be obtained. The majority of Langley AFB, including the proposed action sites, is located within the 100-year floodplain. There is no practicable alternative, however, that would not involve construction in the floodplain. Therefore, the first floor elevation of the Visitors' Quarters would be elevated above the 100-year flood elevation.

Air Quality: Under each proposed action and alternative, additional emissions of less than 0.01 percent of all criteria pollutants would be created during demolition and construction activities. These emissions would be less than 1 percent of emissions in the Hampton Air Quality Control Region (AQCR). Langley AFB is located in a maintenance area for ozone; however, the proposed action would not contribute ozone-related emissions above United States Environmental Protection Agency (USEPA) established de minimis levels for ozone. Therefore, a formal air quality conformity determination is not required.

Hazardous Materials and Waste Management: Construction associated with the proposed action or alternatives would have the potential to disturb portions of various Environmental Restoration Program (ERP) sites. The Langley AFB ERP Manager would coordinate a waiver from Air Combat Command (ACC) concerning construction disturbances on ERP sites. Waivers would identify the appropriate control measures necessary for the activities at the ERP

sites and no long-term adverse environmental consequences are anticipated. Hazardous waste generation is expected with the operation of the new gas and diesel refueling station.

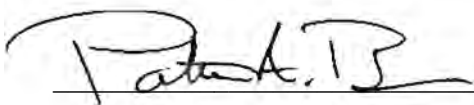
Safety: Demolition and construction associated with the WINDO projects or alternatives would increase safety risks during construction; however, these risks would be reduced with implementation of standard construction safety practices. No significant environmental consequences are anticipated.

Noise: Demolition and construction associated with the proposed action or alternatives would have temporary, localized noise effects. These localized noise increases may disrupt base personnel in nearby structures, however, the noise disruptions would be temporary and would be limited to daytime hours; therefore, environmental consequences are considered insignificant. Noise from training activities at the EOD Range are not anticipated to adversely impact cultural or biological resources given the small amount of explosives used.

No-Action Alternative: Under the No-Action Alternatives no WINDO projects would be constructed, currently inadequate facilities would not be upgraded, force protection setback violations would continue and mission capability would be diminished.

CONCLUSION

This EA concludes that implementing the WINDO projects would not result in significant impacts to the environment. Therefore, issuance of a Finding of No Significant Impact (FONSI) is warranted, and an environmental impact statement is not required. As funding becomes available, each project would be reviewed by the 1 CES/CEV (Environmental Flight) prior to implementation to ensure that there has not been a substantial change in the base mission or project scope, nor significant new circumstances or information relevant to environmental conditions or environmental regulations warranting reevaluation of potential environmental consequences. Should there be a substantive change in scope, conditions, or regulations, the base will pursue additional EIAP, using an interdisciplinary approach. CEV will document the completion of this review. Pursuant to Executive Order (EO) 11988 and EO 11990, the authority delegated in Secretary of the Air Force Order (SAFO) 791.1, and taking the above information into account, I find there is no practicable alternative to this action and that the proposed action includes all practicable measures to minimize harm to wetlands and floodplains.



PATRICK A. BURNS
Brigadier General, USAF
Director of Installations (A7)

31 Aug 05

DATE

Final

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Environmental Assessment**

Langley Air Force Base, Virginia

**U.S. Air Force
Air Combat Command
1st Fighter Wing**

August 2005

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EXECUTIVE SUMMARY

This Environmental Assessment (EA) describes the potential environmental consequences resulting from a proposal to analyze five proposed projects within the Wing Infrastructure Development Outlook (WINDO) Plan at Langley Air Force Base (AFB), Virginia.

ENVIRONMENTAL IMPACT ANALYSIS PROCESS

This EA has been prepared by the United States Air Force (Air Force), Air Combat Command (ACC) and the 1st Fighter Wing (1 FW) located at Langley Air Force Base (AFB) in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) regulations implementing NEPA, and 32 Code of Federal Regulations [CFR] 989, et seq., *The Environmental Impact Analysis Process*.

PURPOSE AND NEED FOR ACTION

The purpose of this action is to upgrade facilities and services associated within the WINDO Plan at Langley AFB. The specific purpose and need for the five projects within the WINDO Plan are presented below.

Government Fuel Station Relocation. Relocation of the government fuel station, Facility 335, is needed in order to provide adequate space for vehicle fueling and off-loading of commercial fuel trucks and a new aboveground storage tank (AST) to store E-85 fuel to meet Executive Order 13149 “*Greening the Government through Federal Fleet and Transportation Efficiency*” and the Energy Policy Act of 1992. In its current configuration the facility does not meet Uniform Fire Code and environmental requirements.

Alert Area Expansion. The expansion for the 119th Fighter Squadron is needed because current facilities do not meet the space requirements necessary to conduct mission objectives. Additionally, development should not occur within 500 feet of the centerline of the runway (08/26) without an airfield obstruction waiver from Air Combat Command.

Visitors’ Quarters Construction. Construction of new visitors’ quarters is required because current buildings (75 and 162) do not adhere to minimum Air Force Lodging Standards. Building 75 does not have private baths in each room.

Explosive Ordnance Disposal (EOD) Training Range Relocation. The relocation of the EOD Training Range is necessary since the explosive safety zones from the current site impede the expansion of the Alert Area and reduce the ability to site needed support facilities in the adjacent 1300 Area. Development of these two areas is needed to meet mission objectives and provide opportunities for the location of compatible uses.

Construction of War Reserve Material (WRM) Group and Air Combat Command Regional Supply Squadron (ACCRSS) Parking Area. To accommodate the relocation of Air Force personnel into Building 332, construction of a new parking area is needed for 180 vehicles. By combining ACCRSS personnel working off base with other ACCRSS personnel on base improved operating efficiencies are anticipated.

PROPOSED ACTIONS AND ALTERNATIVES

Langley AFB proposes to upgrade facilities and services associated within the WINDO Plan within the confines of Langley AFB. This development plan contains five projects as described below:

Government Fuel Station Relocation. This proposed action relocates the government gas and diesel refueling station adjacent to Facility 322, just south of Beech Avenue. This relocation will include new pavement, piping, electrical systems, and landscaping with a berm to buffer the station from Beech Avenue. An alternative location would be to relocate the government gas station to the 1300 Area on the north side of the base.

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This Environmental Assessment (EA) analyzes the impacts associated with proposed construction, demolition, renovation, and relocation related to the five projects contained within the WINDO Plan. This EA evaluates the proposed actions, alternatives, and the No-Action Alternative for each project. Ten resource categories were reviewed through evaluation to identify potential environmental consequences. As indicated in Chapter 4.0, the proposed

actions, their alternatives or the No-Action Alternative would not result in any significant impacts to any resource category.

Land Use, Transportation, and Visual Resources: Construction, demolition, and renovation associated with the proposed actions or alternatives would be consistent with base plans and zoning. The proposed action and the alternatives would, as a matter of comity, be conducted as much as possible so as to be consistent with the Chesapeake Bay Preservation Act and with the goals of the Coastal Zone Management Act (CZMA). No conflicts with existing on-base land uses would result from the construction. The existing government fuel station cannot accommodate additional expansion and it does not meet future protection setback requirements. The alternative site location to the Government Fuel Station has been identified for light industrial land use. As for the EOD Range, access to Gregg Road would be restricted in the area of the range when the range is active. An access road would be required from the closed access point to the detonation point within the range. This road would be closed to traffic during EOD activities. The Alert Facility is located within the Lateral Clearance Surface Zone; however, Langley AFB has secured a waiver to expand facilities within this aircraft operations and maintenance land use area. Construction, demolition, and renovation associated with proposed actions or alternatives would cause minor effects upon transportation by causing minor changes to on-base vehicular circulation. The contractor will provide signage and detours during construction/demolition to maintain access to affected areas.

Socioeconomics: A short-term, positive input into the regional economy would occur during the construction periods of the proposed action or the alternatives. The regional economy would be capable of absorbing the short-term beneficial gain resulting from the construction/demolition associated with the WINDO projects and their alternatives.

Infrastructure: Construction and demolition activities could result in some temporary interruption of utility services. These impacts would be temporary, occurring only for the duration of the construction and demolition period. In general, infrastructure on Langley AFB would improve under the implementation of the proposed actions. New facilities and associated utility upgrades would enhance the existing base operations.

Cultural Resources: Surveys of Langley AFB have resulted in no identification of archaeological resources in the WINDO project areas or their alternative locations. None of the WINDO projects are located within the National Register of Historic Places (NRHP)-eligible Langley Field Historic District. A recent report evaluated the Alert Hangar (Building 1362) as eligible for the NRHP because of its association with the Cold War Era. To comply with Section 106 of the NHPA, Langley AFB and the Virginia SHPO have executed a Memorandum of Agreement with stipulations regarding renovations to the Alert Hangar. These actions include finalizing the draft report, Historic Evaluation Buildings 351 and 1362, Draft (Air Force 2004b); completion of additional recording forms for the SHPO; submittal of a complete set of full-size drawings of the hangar and review of these materials; and provision of reports, drawings and forms to the SHPO, the Office of the Command Historian, HQ ACC, and the U.S. Air Force Historical Research Agency at Maxwell AFB, Alabama. In addition, Langley AFB will include

the Alert Hangar in the revised Langley AFB Cultural Resources Training video, and will highlight the Hangar in its annual Historic Preservation Week activities.

Biological Resources: Construction activities associated with the WINDO projects, as detailed within the proposed action or alternatives, would have no adverse consequences to individual species or native plants or animals at the proposed action or alternative sites since the only plant or animal species likely to be displaced from the location's marginal habitat are individuals of common and locally abundant species. A joint permit would be obtained by the contractor for construction of a pedestrian bridge in the wetlands associated with the WRM/ ACCRSS Parking Area project. Construction would occur in accordance with the requirements contained in that permit. No threatened, endangered, or special species/communities would be adversely affected by the proposed actions or their alternatives. Incidentally occurring listed, proposed, or candidate species are not likely to be adversely affected since there are no designated critical habitats on Langley AFB.

Water Resources: Construction and demolition associated with proposed actions and their alternatives would not be expected to significantly affect the water quality of the Back River and Chesapeake Bay. Prior to the start of construction or demolition, silt fences, storm drain inlet and outlet protection, and other construction practices would be initiated in accordance with the requirements contained in the *Virginia Erosion and Sediment Control Handbook*. Since more than one acre would be disturbed by construction /demolition associated with the projects and their alternatives, a Virginia Pollutant Discharge Elimination System (VPDES) Storm Water Control Permit will be obtained. The majority of Langley AFB, including the proposed action sites, is located within the 100-year floodplain. There is no practicable alternative, however, that would not involve construction in the floodplain. Therefore, the first floor elevation of the Visitors' Quarters would be elevated above the 100-year flood elevations.

Air Quality: Under each proposed action and alternative, additional emissions of less than 0.01 percent of all criteria pollutants would be created during demolition and construction activities. These emissions would be less than one percent of emissions in the Hampton Air Quality Control Region (AQCR). Langley AFB is located in a maintenance area for ozone; however, the proposed action would not contribute ozone-related emissions above United States Environmental Protection Agency (USEPA) established *de minimis* levels for ozone. Therefore, a formal air quality conformity determination is not required.

Hazardous Materials and Waste Management: Construction associated with the proposed action or alternatives would have the potential to disturb portions of various Environmental Restoration Program (ERP) sites. The Langley AFB ERP Manager would coordinate a waiver from ACC policy concerning construction disturbances on ERP sites. Waivers would identify the appropriate control measures that would be necessary for the activities at the ERP sites and no long-term adverse environmental consequences are anticipated. Hazardous waste generation is expected with the operation of the new gas and diesel refueling station.

Safety: Demolition and construction associated with the WINDO projects or alternatives would increase safety risks during construction; however these risks would be reduced with

implementation of standard construction safety practices. No significant environmental consequences are anticipated.

Noise: Demolition and construction associated with the proposed action or alternatives would have temporary, localized noise effects. These localized noise increases may disrupt base personnel in nearby structures, however, the noise disruptions would be temporary and would be limited to daytime hours; therefore, environmental consequences are considered insignificant. The proposed action will relocate the existing EOD range from an area adjacent to the 1300 Area, to an area near the Munitions Storage Area that is less developed. Additionally, due to the small size of the explosive charges used no impacts to biological or archeological resources are expected.

No-Action Alternative: Under the No-Action Alternatives no WINDO projects would be constructed, currently inadequate facilities would not be upgraded, force protection setback violations would continue and mission capability would be diminished. No environmental consequences would result from the No-Action Alternatives.

CONCLUSION

This EA concludes that implementing the WINDO projects would not result in significant impacts to the environment. As funding becomes available, each project would be reviewed by the 1 CES/CEV (Environmental Flight) prior to implementation to ensure that there has not been a substantial change in the base mission or project scope, nor significant new circumstances or information relevant to environmental conditions or environmental regulations warranting reevaluation of potential environmental consequences. Should there be a substantive change in scope, conditions, or regulations, the base will pursue additional EIAP, using an interdisciplinary approach. 1 CES/CEV will document the completion of this review.

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1.0 PURPOSE AND NEED FOR ACTION

1.1 INTRODUCTION

The United States Air Force (Air Force), 1st Fighter Wing (1 FW) proposes to implement the Wing Infrastructure Development Outlook (WINDO) Plan for Langley Air Force Base (AFB), Virginia. The WINDO is a plan designed to identify construction and demolition projects proposed for improving the physical infrastructure and functionality of Langley AFB, and is Air Combat Command's (ACC) initiative to improve the facility planning process. The intent of the WINDO is to capture the Wing Commander's vision of what infrastructure improvements are necessary to support the mission of the 1 FW and their tenants.

This environmental assessment (EA) has been prepared to analyze the potential environmental consequences associated with the proposed action and alternatives in accordance with the requirements of the National Environmental Policy Act (NEPA). This document was prepared in accordance with the following:

- Requirements of the NEPA of 1969, (42 USC 4321-4347) CEQ Regulations for Implementing the Procedural Provisions of NEPA;
- Regulations established by the Council on Environmental Quality (CEQ) (40 Code of Federal Regulations [CFR] 1500-1508);
- 32 CFR Part 989, et seq., *Environmental Impact Analysis Process* ;

This EA also provides an evaluation of potential coastal zone impacts pursuant to National Oceanic and Atmospheric Administration Coastal Zone Management regulations (15 CFR 930). Consequently, this EA serves as coastal consistency determination documentation with respect to implementation of the proposed actions or the alternatives.

Section 1.2 provides background information that briefly describes Langley AFB. The purpose and need for the proposed action are described in Section 1.3. A detailed description of the proposed action, alternatives, and No-Action Alternative are provided in Chapter 2.0. Chapter 3.0 describes the existing conditions of various environmental resources that could be affected if the proposals were implemented. Chapter 4.0 describes how those resources would be affected by implementation of the proposed actions and alternatives. Chapter 5.0 addresses the cumulative effects of the proposed actions, as well as other recent past, current, and future actions that may be implemented in the region of influence (ROI) for the proposed actions.

1.2 BACKGROUND

1.2.1 Langley AFB

Langley AFB is located approximately 175 miles south of Washington, D.C., near the south end of the lower Virginia Peninsula on the Back River, a tributary of the Chesapeake Bay. Langley AFB is situated in the Hampton Roads Standard Metropolitan Statistical Area, in the City of Hampton, Virginia. Other cities in the area include Newport News, Poquoson, Norfolk, and

Portsmouth. As shown in Figure 1-1, the main base occupies 2,883 acres between the Northwest and Southwest Branches of the Back River.

Langley AFB is headquarters for ACC and home of the 1 FW. ACC is one of eight major commands in the Air Force and is responsible for organizing, equipping, training, and maintaining combat-ready forces at the highest level of readiness. The primary mission of Langley AFB is to provide air operational support to a broad spectrum of aircraft in both peacetime and combat environments. General goals of the base are to sustain the resources and relationships deemed appropriate to pursue national interests, and provide for the command, control, and communications necessary to execute the missions of the Air Force, ACC, and the 1 FW.

1.2.2 The WINDO Plan

The WINDO is the Command's initiative to improve the facility planning process. The intent of WINDO is to capture the Wing Commander's vision of what infrastructure improvements are necessary to support the mission. The WINDO links the Langley General Plan to individual funding programs. The goal of the WINDO is to document the projects needed over the next three years, provide an environmental analysis of these projects, and be prepared to implement the appropriate facility improvements as funds become available. The WINDO benefits Langley AFB through:

- Coordinating land use planning, zoning, and infrastructure project development;
- Expediting project execution through early planning;
- Streamlining the National Environmental Policy Act review process for defined infrastructure projects;
- Providing cost savings through a comprehensive NEPA analysis;
- Maintaining a current baseline for future analysis;
- Supporting tiering of environmental analysis and application of categorical exclusions;
- Meeting legal requirements and resource protection responsibilities;
- Encouraging agency coordination on a suite of projects rather than individually.

All projects would be located within the boundaries of Langley AFB. The projects included within this WINDO Plan include relocation of the Government Fuel Station; expansion of the Alert Area; construction of new Visitors' Quarters; relocation of the Explosive Ordnance Disposal (EOD) Training Range; and Construction of War Reserve Material (WRM) Group and Air Combat Command Regional Supply Squadron (ACCRSS) Parking Area.

Langley AFB will undergo changes in mission and training requirements in response to defense policies, current threats, and tactical and technological advances. This WINDO EA can be used as a baseline for future environmental analysis of such mission and training requirements.

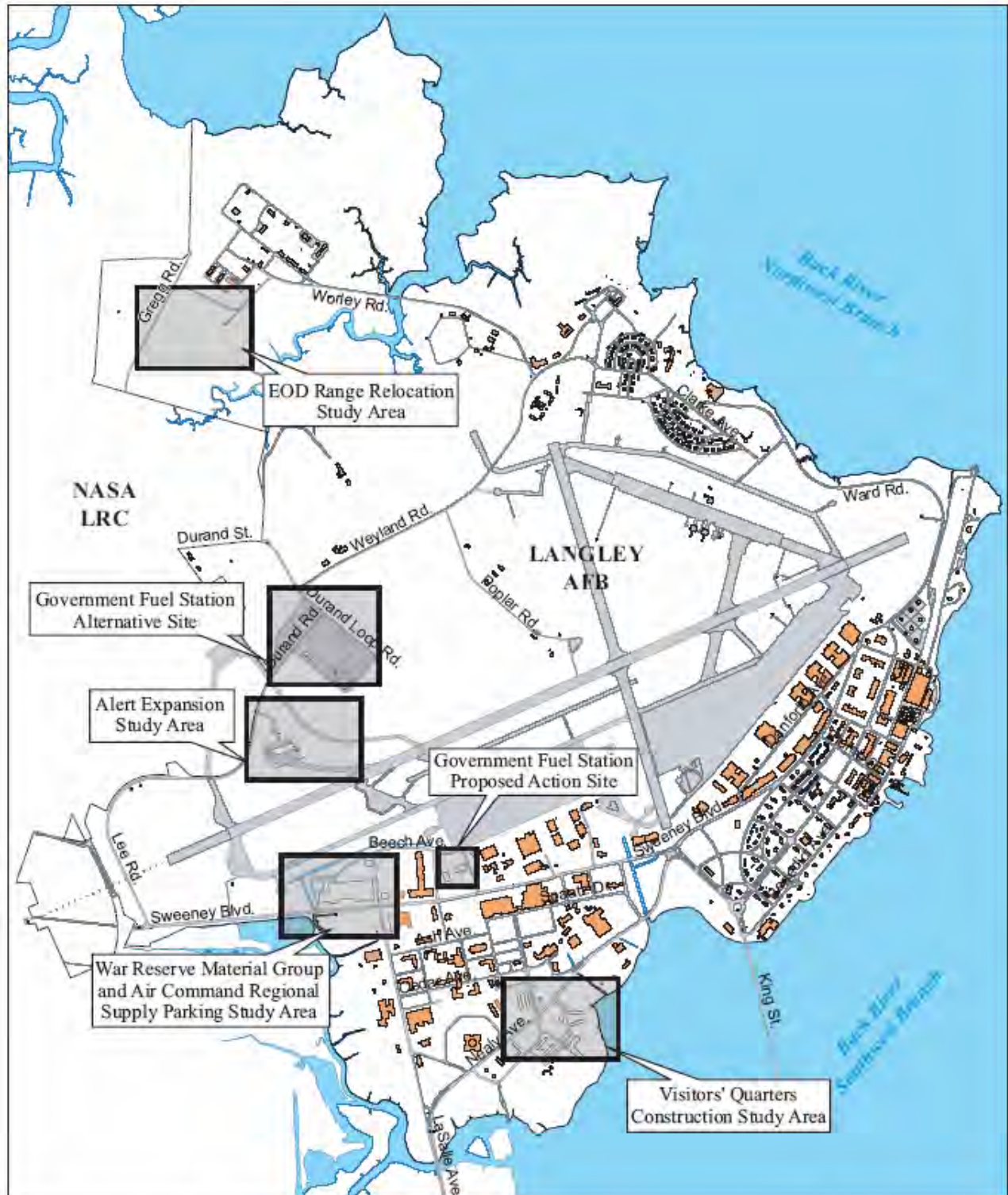
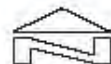


Figure 1-1
Wing Infrastructure Development Study Areas
Langley AFB, Virginia



1.3 PURPOSE AND NEED

The purpose of the actions is to upgrade facilities and services within the WINDO Plan at Langley AFB.

Government Fuel Station Relocation. Relocation of the government fuel station, Facility 335 is needed in order to provide adequate space for vehicle fueling and off-loading of commercial fuel trucks and a new aboveground storage tank (AST) to store E-85 fuel to meet Executive Order 13149 *“Greening the Government through Federal Fleet and Transportation Efficiency”* and the Energy Policy Act of 1992. In its current configuration the facility does not meet Uniform Fire Code and environmental requirements.

Alert Area Expansion. The expansion for the 119th Fighter Squadron is needed as current facilities do not meet the space requirements necessary to conduct mission objectives. Additionally, development should not occur within 500 feet of the centerline of the runway (08/26) without an airfield obstruction waiver from Air Combat Command.

Visitors’ Quarters Construction. Construction of new visitors’ quarters is required since current buildings (75 and 162) do not adhere to minimum Air Force Lodging Standards. Building 75 does not have private baths in each room.

Explosive Ordnance Disposal (EOD) Training Range Relocation. The relocation of the EOD Training Range is necessary since the explosive safety zones from the current site impede the expansion of the Alert Area and reduce the ability to site needed support facilities in the adjacent 1300 Area. Development of these two areas is needed to meet mission objectives and provide opportunities for the location of compatible uses.

Construction of War Reserve Material (WRM) Group and Air Combat Command Regional Supply Squadron (ACCRSS) Parking Area. To accommodate the relocation of Air Force personnel into Building 332, construction of a new parking area is needed for 180 vehicles. By combining ACCRSS personnel working off base with other ACCRSS personnel on base improved operating efficiencies are anticipated.

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

Langley AFB proposes construction, demolition, and renovation associated with relocation of the government fuel station, expansion of the Alert Area, construction of new Visitors' Quarters, relocation of the EOD Training Range, and construction of a parking area for the War Reserve Material Group (WRM) and Air Combat Command Regional Supply (ACCRSS). In addition to the proposed actions, this EA evaluated several alternatives, and No-Action Alternatives. Figures 2-1 through 2-6 depict the location of the proposed actions and alternatives.

2.1 PROPOSED ACTIONS

2.1.1 Government Fuel Station Relocation

The Government Fuel Station Relocation proposed action is to relocate the government gas and diesel refueling station adjacent to Facility 322, just south of Beech Avenue (see Figure 2-1). This site is designated for industrial land use. This relocation would include new pavements, piping, electrical systems, and landscaping with a berm to buffer the station from Beech Avenue. The action would include the relocation of the two existing 12,000-gallon above ground storage tanks (AST) from their current location to the new site and adding one additional AST. The station would be situated within an approximately 30,000 square-foot area.

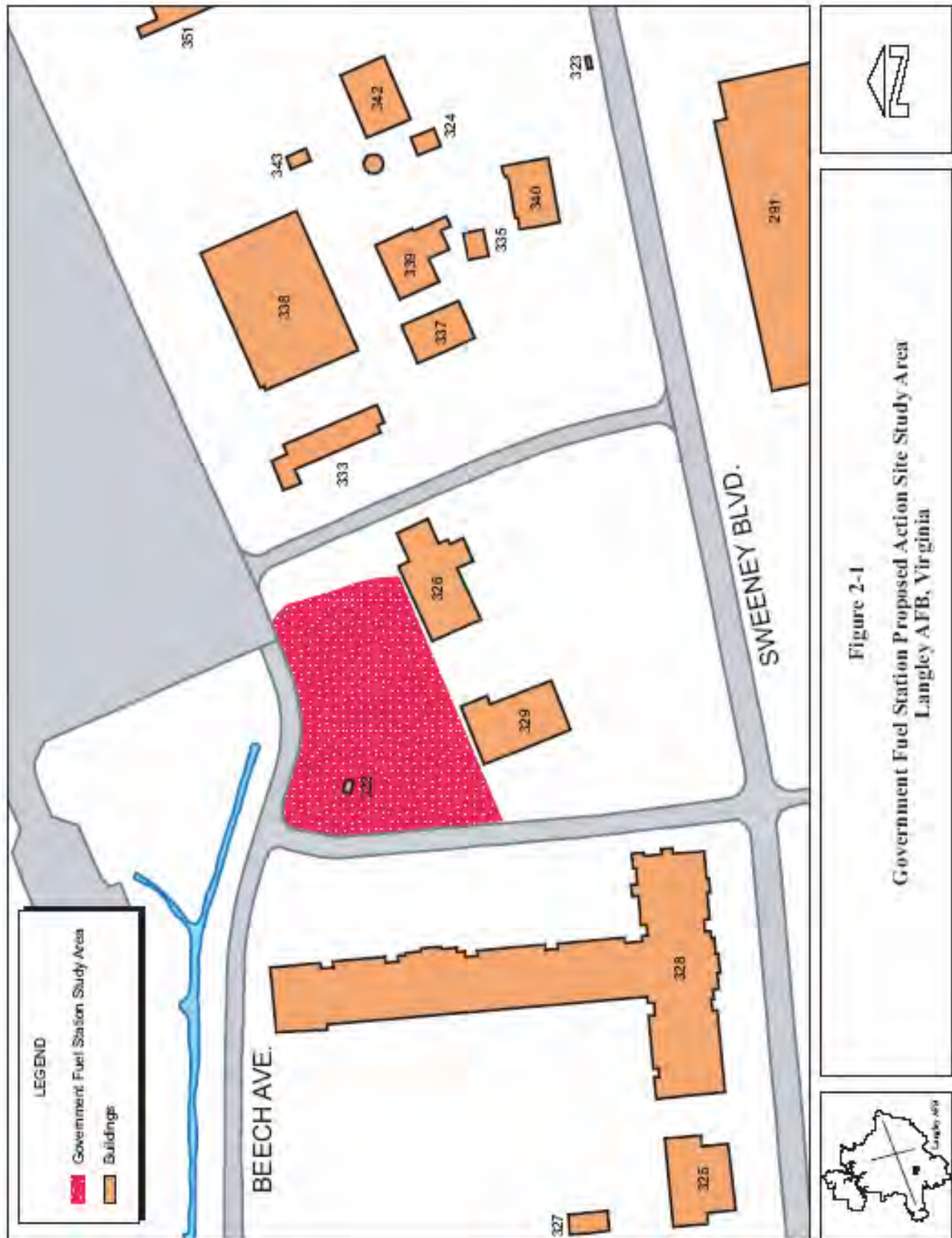
Landscaping to establish proper screening would be required to place the government gas and diesel refueling station at this site. Construction of the station is scheduled for Fiscal Year (FY) 2005.

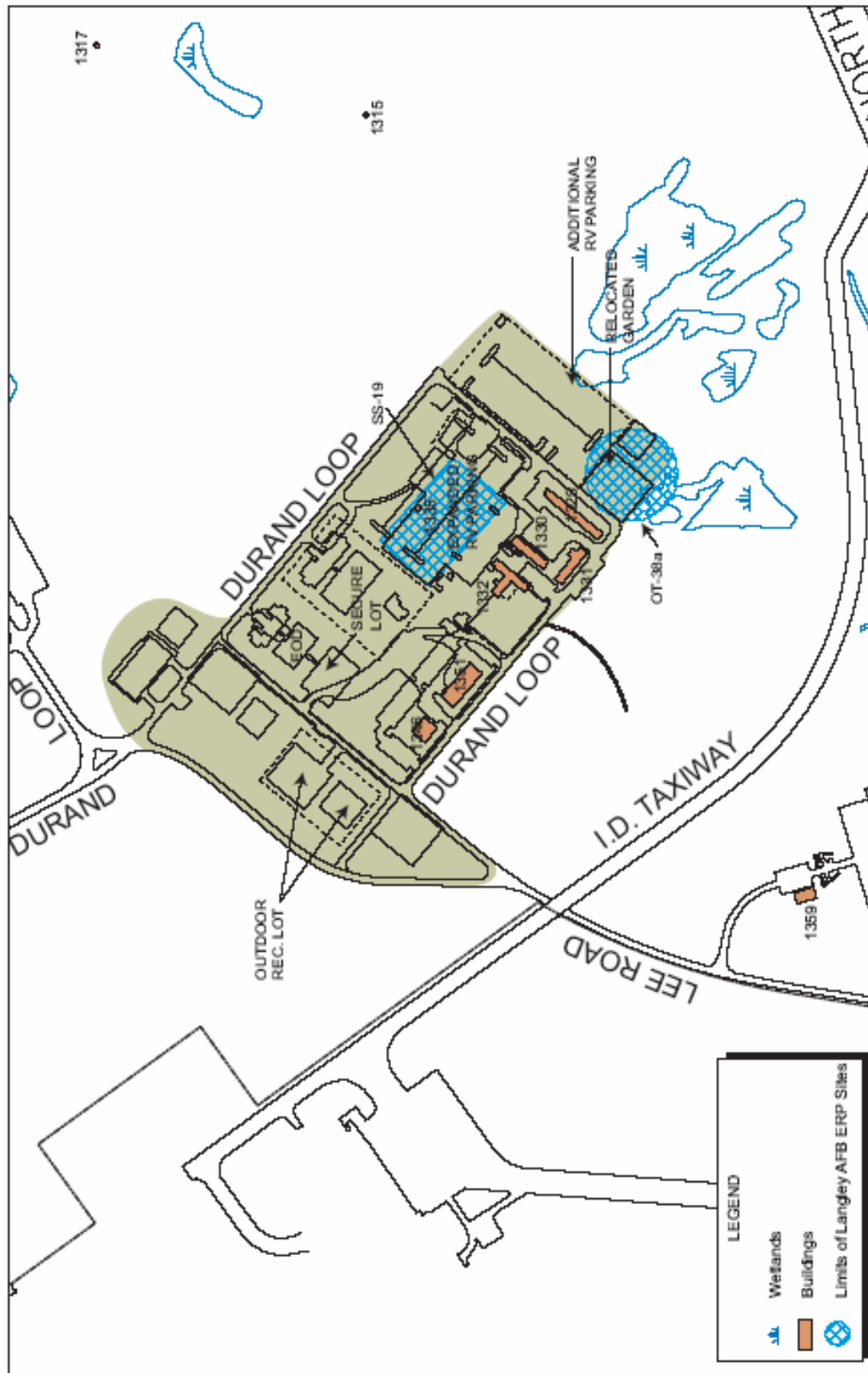
2.1.2 Alert Area Expansion

The Alert Area Expansion proposed action is to expand the 119th Fighter Squadron compound to an area southwest of Lee Road and northwest of the Northeast-Southwest Runway (see Figure 2-3). The study area for the expansion comprises approximately 130 acres in size. Specifically expansion includes expanding the alert area ramp, taxiway repair, addition of perimeter security, and replacement of the alert hangar roof and doors. Upgrades to this area are necessary for support of the ACC mission, Operation NOBLE EAGLE/ Air Sovereignty Alert homeland defense requirements.

2.1.3 Visitors' Quarters Construction

The Visitors' Quarters Construction proposed action area is located south to southwest of Nealy Avenue (see Figure 2-4). This project includes demolition of existing Buildings 74 and 75, existing asphalt paving, concrete walkways and all existing underground utilities. When demolition is complete, a 4-story visitors' quarters building containing 210 rooms would be constructed on the northeast corner of Nealy Avenue and Tuskegee Airmen Boulevard. The footprint of this new building covers approximately 36,000 square feet. An adjacent parking area containing 113 spaces would also be constructed. This construction and demolition is necessary as current facilities (75 and 162) do not adhere to minimum square footage standards. In addition, Building 75 does not have private baths in each room, and utilities at these facilities require upgrading.







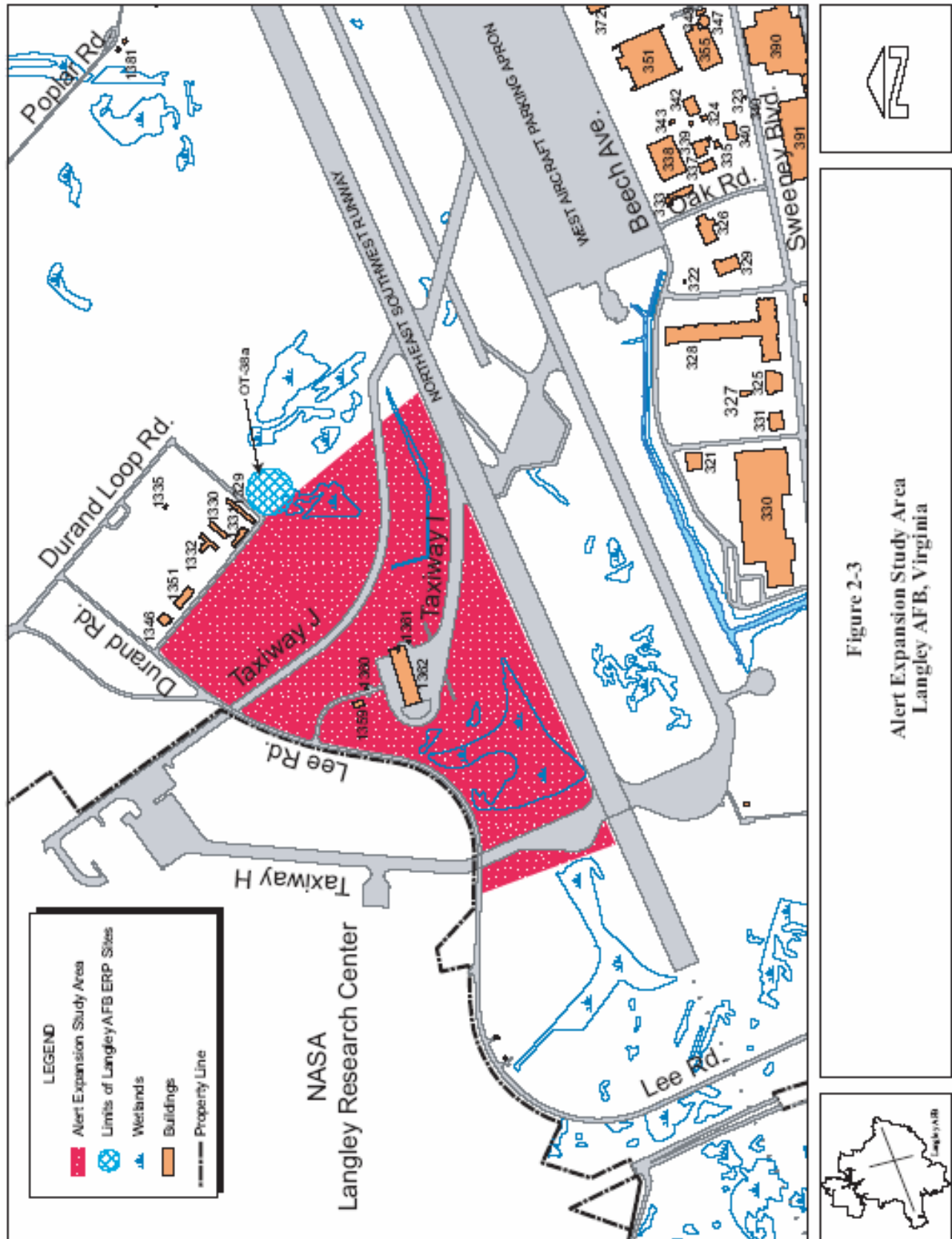


Figure 2-2
Government Fuel Station Relocation Alternative Site Study Area
Langley AFB, Virginia





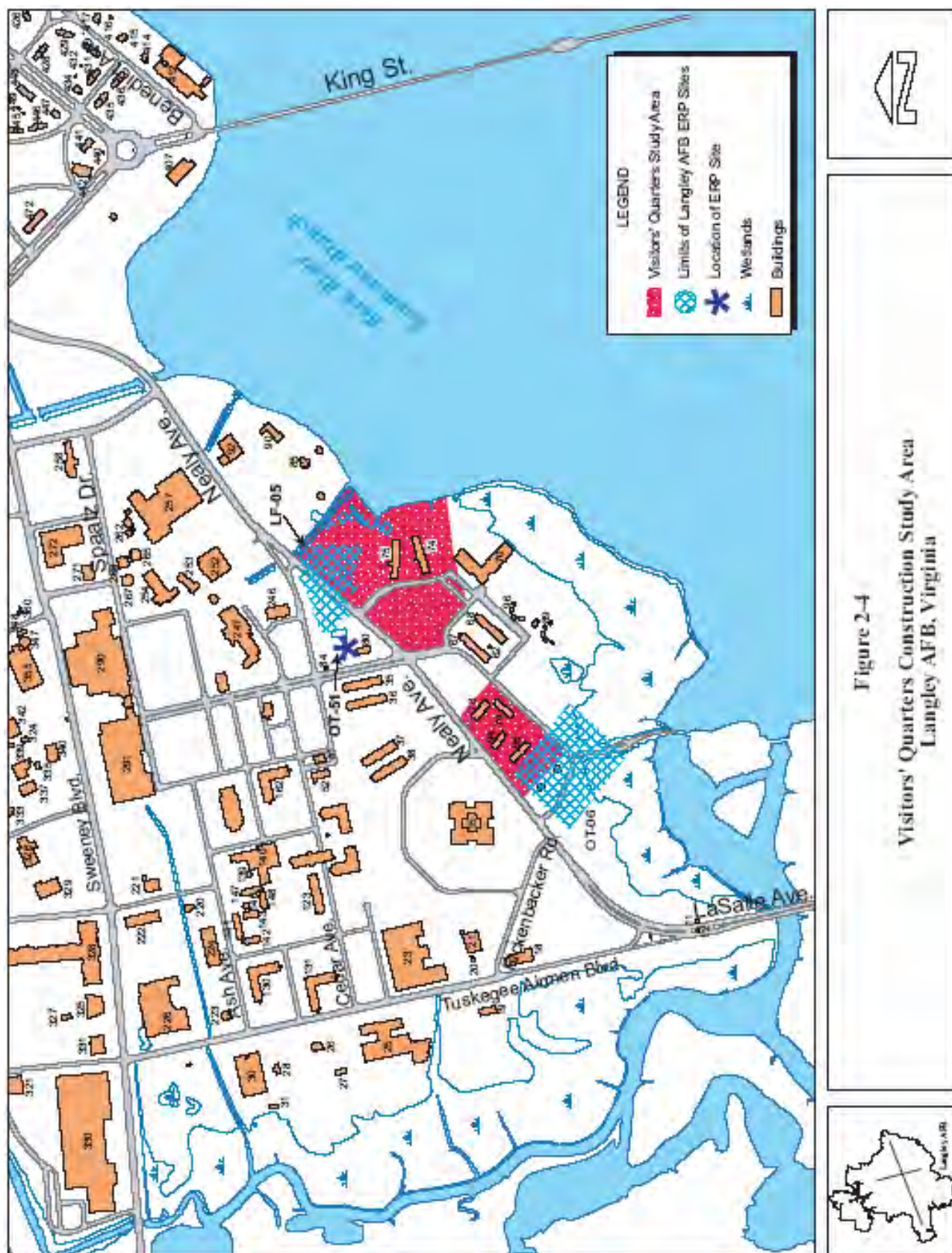


Figure 2-4
Visitors' Quarters Construction Study Area
Langley AFB, Virginia

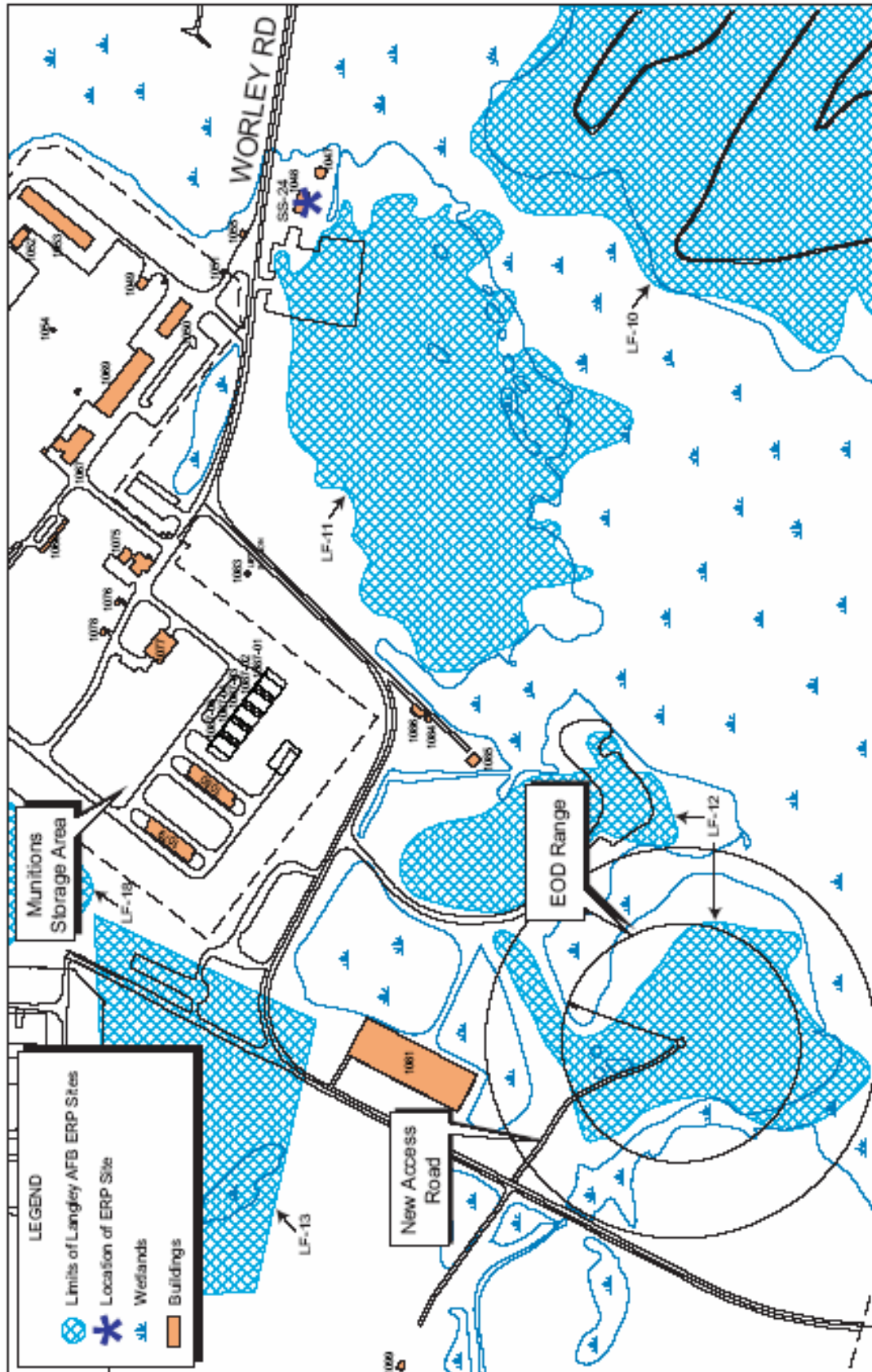


Figure 2-5
EOD Range Relocation Site
Langley AFB, Virginia

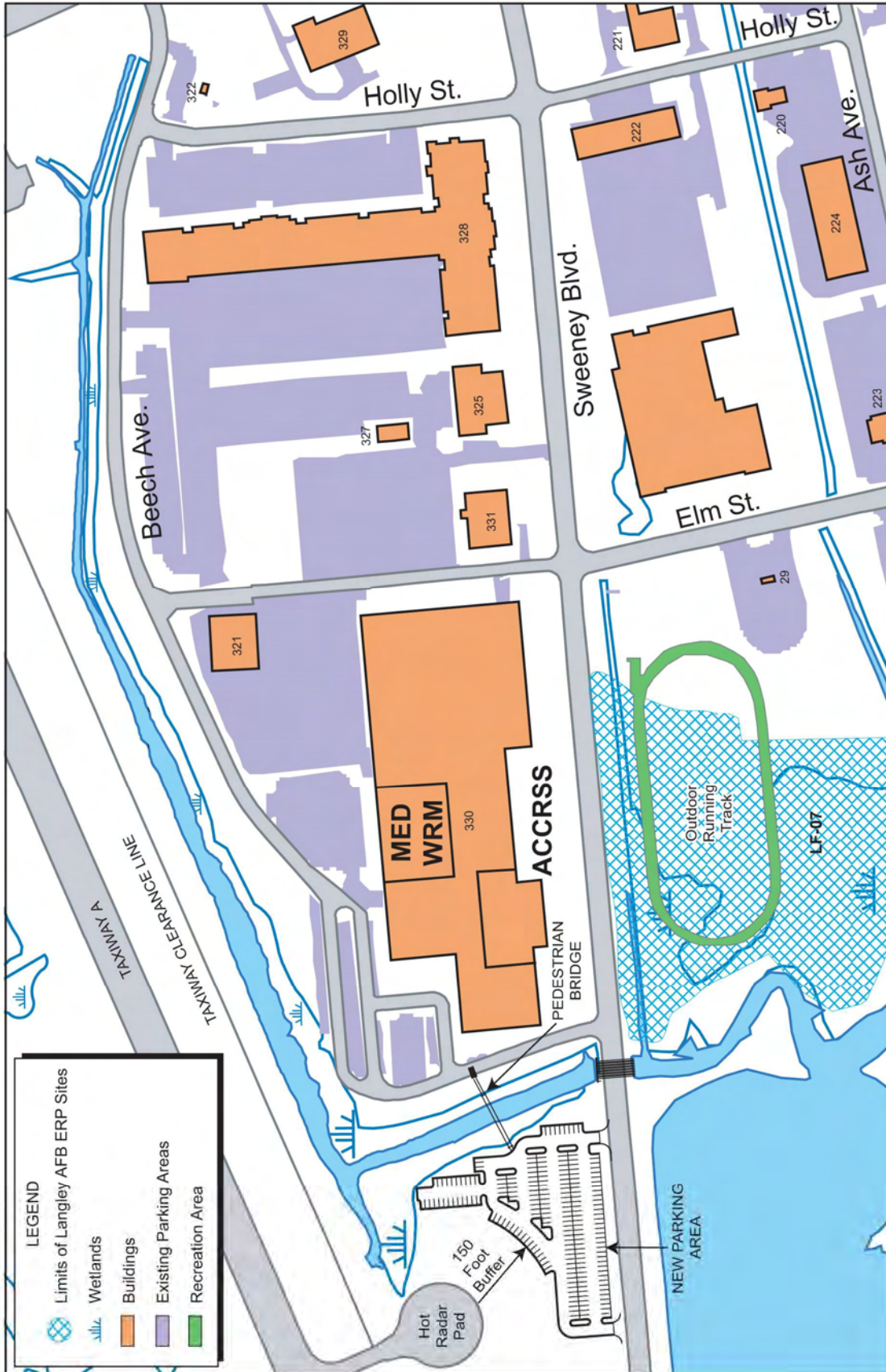


Figure 2-6

War Reserve Material Group (WRM) and
Air Command Regional Supply (ACRSS) Parking Study Area
Langley AFB, Virginia

2.1.4 EOD Training Range Relocation

The EOD Training Range Relocation proposed action includes relocating the EOD Training Range to the North Base Industrial Area, just south of the Munitions Storage Area on the east side of Gregg Road (see Figure 2-5).

Air Force Technical Order (TO) 11A-1-42 establishes criteria for disposal of conventional munitions on EOD Ranges. AFM 91-201 establishes the criteria for locating these facilities. In accordance with TO 11A-1-42 a 500-foot circular clearance zone around the center detonation point is required. Additionally, inside this clearance zone, approximately 200 feet around the detonation point is required to be cleared of all vegetation to reduce the risk of fire; and a 100 foot area around the detonation point would be filled with gravel and leveled. Also, 10-feet around the detonation point would be cleared of any debris, filled with sand and leveled. A barricade, similar to the one at the current EOD range would surround the detonation point to stop the blast, and secondary fragmentation. The barricade will also serve to keep out intruders. An access road would be built from Gregg Road, avoiding existing wetlands, to the detonation area; and signage would be installed every 300 feet around the perimeter of the range. A flag pole would be located at the entrance of the range to post the “hot range” warning flag; and the entrance to the range would be secured by barricades, gates or guards at the entrance.

2.1.5 Construction of WRM Group and ACCRSS Parking Area

The WRM and ACCRSS Parking Area proposed action includes construction of a 180-vehicle parking area with the driveways onto Sweeney Boulevard (see Figure 2-6). These parking spaces would be needed to accommodate additional personnel that would be located within the WRM/ ACCRSS Building (330). In order to access this parking area, a pedestrian bridge would be constructed over the existing creek; and two entrance/exits would be installed to access Sweeney Boulevard.

WINDO STANDARD CONSTRUCTION PRACTICES

Prior to construction or demolition at any site, a construction laydown area and haul route would be established and coordinated with 1st Civil Engineering Squadron (1 CES). Appropriate erosion and siltation controls would be implemented and maintained in effective operating condition prior to, and throughout all construction and demolition activities. Langley AFB and its contractor shall comply with Virginia Administrative Code 9 VAC 25-210, Water Quality Standards, and all other appropriate water quality laws and regulations of the Commonwealth of Virginia, Virginia Department of Environmental Quality (VDEQ).

To minimize the potential for secondary (indirect) impacts to wetlands and water resources within, and adjacent to, the project areas, the following management requirements would be employed:

- Entrenched silt fencing would be installed and maintained along the perimeter of the construction site prior to any ground-disturbing activities.
- Erosion control measures would be inspected on a weekly basis and after rain events. Controls would be replaced as needed.

- To the greatest extent possible, the use of heavy equipment would be avoided after heavy rain events. Such equipment would be prohibited in all wetland areas.
- Construction site entrance would be stabilized using Virginia Department of Transportation (VDOT)-approved stone and geotextile (filter fabric).
- Construction activities would be sequenced (phased) to limit the soil exposure for long periods of time.
- Cleared areas would be vegetated or mulched once final grade has been established.
- The construction of the proposed pedestrian crossing associated with the WRM Group and ACCRSS parking areas will incorporate the use of turbidity screens with weighted bottoms.

Similarly, fugitive dust would be controlled by the use of standard construction practices. In all cases where construction disturbs the existing vegetation or other ground surface, the contractor would revegetate the area as approved by the base or restore the surface as directed by the base.

2.2 ALTERNATIVES TO THE PROPOSED ACTION

2.2.1 Government Fuel Station Relocation

ALTERNATIVE ONE

Alternative One would relocate the government gas and diesel refueling station to the 1300 Area. This site would allow nearby National Aeronautics and Space Administration (NASA) access. This site would also require extensive landscaping to establish proper screening, and room for the fuel containment pad.

2.2.2 Alert Area Expansion

ALTERNATIVE ONE

Alternative One would be to close, relocate, and/or declassify the Juliet Taxiway to address the 500 foot Accident Potential Zone (APZ) clear zone minimum distance requirements from the centerline of runway 08/26 with expansion of the alert area proposed under the Proposed Action.

ALTERNATIVE TWO

Alternative Two would be to operate the 119th Fighter Squadron at the West Ramp instead of constructing additional ramp space.

2.2.3 Visitors' Quarters Construction

ALTERNATIVE ONE

Alternative One would construct the new visitors' quarters east of the B-52 static display off of Nealy Avenue, near the main gate.

2.2.4 EOD Training Range Relocation

Relocation of the EOD range requires compliance with explosive safety standards including quantity distance arcs. Alternative relocation sites were evaluated but rejected due to explosive safety issues (i.e. insufficient clear areas for compliance with Quantity –Distance (Q-D) arc requirements).

2.2.5 Construction of WRM and ACCRSS Parking Area

Since the proposed action is to provide parking for WRM and ACCRSS personnel, no other location for the parking area is suitable to provide acceptable parking.

2.3 NO-ACTION ALTERNATIVE

Under the No-Action Alternative, specific construction or demolition projects would not be implemented. Selection of the No-Action Alternative would result in continued use of existing facilities. Without implementation of the Proposed Action, Langley AFB would not adequately meet future mission requirements or changes due to inadequate facilities and would not meet its WINDO development goals.

- Future growth would be hampered;
- Space requirements necessary to facilitate mission objectives would not be realized;
- Force protection setback requirements would not be met;
- Quality of life for base personnel would decrease and aging facilities would continue to deteriorate;

2.4 ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD

In addition to the proposed actions discussed above, an additional alternative involving relocation of the government fuel station to Poplar Road was reviewed. Use of 0.7 acres of property was found to be an unreasonable fragmentation of a larger potentially developable parcel. Also potential uses of the flightline area to the east of Poplar Road may render this location incompatible with explosive safety zones of the flightline. Therefore this alternative location was eliminated from detailed consideration.

2.5 ENVIRONMENTAL IMPACT ANALYSIS PROCESS

The Environmental Impact Analysis Process (EIAP) includes the review of all information pertinent to the proposed actions and reasonable alternatives and provides a full and fair discussion of potential consequences to the natural and human environment. The process includes involvement with the public and agencies to identify possible consequences of an action, as well as the focusing of analysis on environmental resources potentially affected by the proposed action, alternatives, or No-Action Alternatives.

2.5.1 Public and Agency Involvement

Through the scoping process, the Air Force obtained information regarding pertinent environmental issues the agencies felt should be addressed in the environmental impact

analysis. Executive Order (EO) 12372, *Intergovernmental Review of Federal Programs*, requires intergovernmental notifications prior to making any detailed statement of environmental impacts. Through the process of Interagency and Intergovernmental Coordination for Environmental Planning (IICEP), the proponent must notify concerned federal, state, and local agencies and allow them sufficient time to evaluate potential environmental impacts of a proposed action. Agency consultations were undertaken with regard to biological and cultural resources, primarily for compliance with the Endangered Species Act (ESA) and with the National Historic Preservation Act (NHPA). Appendix A identifies agencies contacted as part of the IICEP process and includes agency responses.

The Air Force published a newspaper advertisement on April 18, 2005 in *The Daily Press* and on May 6, 2005 in the Langley AFB newspaper, *The Flyer* announcing the availability of the Draft EA for public review at the Langley AFB library, in libraries in the cities of Hampton and Poquoson, and in the York County library. Langley AFB, through its Public Affairs office, provided the media with a press release identifying the availability of the Draft EA. Copies of the newspaper advertisements and the press release with its distribution list are included in Appendix B. No comments were received from the public during the 30-day review period.

Copies of the Draft EA were provided to the VDEQ Single Point of Contact to allow for review by appropriate state and local agencies. No comments were received that required additional analysis that would have resulted in changes to the impacts identified in the Draft EA. This Final EA would support the signing of a FONSI/FONPA.

2.5.2 Regulatory Compliance

This EA has been prepared to satisfy the requirements of NEPA (Public Law [P.L.] 91-190, 42 USC 4321 *et seq.*) as amended in 1975 by P.L. 94-52 and P.L. 94-83. The intent of NEPA is to protect, restore, and enhance the environment through well-informed federal decisions. In addition, this document was prepared in accordance with 32 CFR Part 989, *et seq.*, *Environmental Impact Analysis Process*, which implements Section 102 (2) of NEPA and regulations established by the Air Force (40 CFR 1500-1508; 32 CFR Part 989).

Implementation of the proposed actions, alternatives, or the No-Action Alternative would require concurrence from several regulatory agencies. Compliance with the ESA involves communication with the Department of the Interior (delegated to the U.S. Fish and Wildlife Service [USFWS]) in cases where a federal action could affect listed threatened or endangered species, species proposed for listing, or species that could be candidates for listing. A letter was sent to the appropriate Fish and Wildlife Service (FWS) agencies, as well as their state counterparts, informing them of the proposed actions and requesting data regarding applicable protected species. The preservation of cultural resources falls under the purview of State Historic Preservation Office (SHPO), as mandated by the National Historic Preservation Act (NHPA) and its implementing regulations. VDEQ would provide SHPO with a copy of the Draft EA for review and coordination.

2.5.3 Permit Requirements

This EA has been prepared in compliance with NEPA; other federal statutes, such as the Clean Air Act (CAA) and the Clean Water Act (CWA); EOs, and applicable state statutes and regulations. Table 2-1 summarizes applicable federal, state, and local regulatory review and permits necessary for the implementation of the proposed action. In addition to this EA being prepared for the decision maker and the interested public, it is also a tool for Air Force personnel to ensure compliance with all regulatory requirements from proposal through project implementation.

Table 2-1. Environmental-Related Regulatory Requirements

<i>Type of Permit or Regulatory Requirement</i>	<i>Requirement</i>	<i>Agency</i>
Endangered Species Act (ESA)	Required to consult on impacts of project implementation on federally listed or proposed threatened and endangered species	U.S. Fish and Wildlife Service (USFWS); Virginia Department of Game and Inland Fisheries
U.S. Army Corps of Engineers Section 404	Required for authorizing fill within wetlands or water of the United States	U.S. Army Corps of Engineers, Norfolk District; City of Hampton, VDEQ and VMRC
Clean Water Act (CWA) and Virginia Stormwater Management Act	General Permit for Discharges of Stormwater from Construction Activities for construction activities greater than 2,500 square feet.	Commonwealth of Virginia, Department of Conservation and Recreation
Clean Air Act (CAA)	Potential modification to VDEQ Synthetic Minor Permit	Commonwealth of Virginia, VDEQ
National Historic Preservation Act (NHPA) Section 106	Consultation with State Historic Preservation Office (SHPO) and Notification to Advisory Council on Historic Preservation (ACHP)	Commonwealth of Virginia Department of Historic Resources (VDHR); ACHP
Coastal Consistency Determination	Determine consistency with Commonwealth's Coastal Zone Management Program	Commonwealth of Virginia, VDEQ

Any action that may encroach upon waters or wetlands regulated by State and /or Federal law and regulation will require a joint application with the USACE-Norfolk District, VDEQ, the City of Hampton, and the Virginia Marine Resources Commission (VMRC). Langley AFB and its contractor shall submit a *Permit for Construction in Waters in the Commonwealth and in Wetlands* to satisfy all federal, local, and state requirements. All actions involving construction/demolition in, or adjacent to, wetlands shall be in compliance with the Clean Water Act, Section 404(b)(1) Guidelines (U.S.C., Section 1344). Water Quality Certification (pursuant to the Clean Water Act, Section 401), would be obtained prior to any proposed construction and demolition activities.

The relocation of any existing stormwater infrastructure would be addressed through the Virginia Water Protection Permit program administered by VDEQ (V.A.C., 62.1-44.15.5) and in accordance with *the DoD Unified Facilities Criteria Manual 3-21010* and the *Virginia Erosion and Sediment Control Handbook*.

2.6 COMPARISON OF ALTERNATIVES

Table 2-2 summarizes the potential environmental impacts of the proposed actions, alternatives, and No-Action Alternatives, based on the detailed impact analyses presented in Chapter 4.0. In no instance would the potential environmental consequences be significant with the implementation of the proposed actions or alternatives. Under the No-Action Alternatives, no changes would be made to the government fuel station, the Alert Area, or the EOD Training Range. In addition, construction of the WRM/ ACCRSS Parking Area and the Visitors' Quarters would not take place.

Table 2-2. Summary of Potential Environmental Impacts of Proposed Actions, Alternatives, and No-Action Alternatives

GOVERNMENT FUEL STATION RELOCATION			
<i>Resources</i>	<i>Proposed Action</i>	<i>Alternative One</i>	<i>No Action Alternative</i>
Land Use, Transportation and Visual Resources	Consistent with Base General Plan, Alert Area ADP and HQ ACC Zoning initiative. Minor changes to traffic and visual character due to proposed construction.	Not consistent with Base General Plan or the 1300 Area ADP. Extensive landscaping screening required to maintain visual character of 1300 Area.	No change in land use status, transportation or visual resources.
Socioeconomics	Slight short-term beneficial increase in construction employment and spending. No long-term change in employment or expenditures.	Slight short-term beneficial increase in construction employment and spending. No long-term change in employment or expenditures.	No change in employment or expenditures at the base or within the region.
Infrastructure	Proposed construction would lead to minor increases in utility demands that can be met by existing suppliers.	Proposed construction would lead to minor increases in utility demands that can be met by existing suppliers.	No changes to infrastructure would occur.
Cultural Resources	Site has been heavily disturbed and no impacts to archaeological resources are anticipated. No impacts to historic architectural or traditional resources.	Area not surveyed for archaeological resources and there is the potential for impacts to. Cultural resources. No impacts to historic architectural resources or traditional resources.	No change to historic architectural resources, archeological resources, or traditional resources. Existing cultural resources would continue to be managed in accordance with federal laws and Air Force regulations.
Biological Resources	Impacts to wildlife and native habitats would be negligible. No wetlands would be affected. No impacts to federally listed, threatened, or endangered species or critical habitat.	Impacts to wildlife and native habitats would be negligible. Small area of wetlands would be avoided through site design. No impacts to federally listed, threatened, or endangered species or critical habitat.	No change to biological resources.
Water Resources	Standard construction practices would be instituted and a General Permit for Discharges of Stormwater from Construction Activities would be required as a result of disturbance over 2,500 square feet. There is no practicable alternative to development within the 100-year floodplain.	Standard construction practices would be instituted and a General Permit for Discharges of Stormwater from Construction Activities would be required as a result of disturbance over 2,500 square feet. There is no practicable alternative to development within the 100-year floodplain.	No change in current operations and no change in water resources.

Table 2-2. Summary of Potential Environmental Impacts of Proposed Actions, Alternatives, and No-Action Alternatives (cont.)

GOVERNMENT FUEL STATION RELOCATION (CONT.)				
<i>Resources</i>	<i>Proposed Action</i>	<i>Alternative One</i>	<i>No Action Alternative</i>	
Air Quality	Construction emissions do not exceed de minimis levels, however Synthetic Minor Operating Permit modification required for storage tanks.	Construction emissions do not exceed de minimis levels, however Synthetic Minor Operating Permit modification required for storage tanks.	No change in current operations; no changes in air quality.	
Hazardous Materials and Waste Management	Potential use of hazardous materials and hazardous waste generation during construction. No ERP sites at proposed location.	Potential use of hazardous materials and hazardous waste generation during construction. ERP sites SS-19 and OT-38a potentially located near alternative location.	No change in use of hazardous materials or generation of hazardous waste.	
Safety	Temporary increase in ground safety risk due to construction activities. Construction compatible with airfield development criteria.	Temporary increase in ground safety risk due to construction activities. Construction compatible with airfield development criteria.	No change in current operations; no increase in safety consequences.	
Noise	Short-term (90-95 dBA) impacts from construction noise. No off-base noise impacts.	Short-term (90-95 dBA) impacts from construction noise. No off-base noise impacts.	No change in base noise levels.	
ALERT AREA EXPANSION				
<i>Resources</i>	<i>Proposed Action</i>	<i>Alternative One</i>	<i>Alternative Two</i>	<i>No Action Alternative</i>
Land Use, Transportation and Visual Resources	Consistent with Base General Plan, Alert Area ADP and HQ ACC Zoning initiative. Minor changes to traffic and visual character due to proposed construction.	Consistent with Base General Plan, Alert Area ADP and HQ ACC Zoning initiative. Minor changes to traffic and visual character due to proposed construction.	Consistent with Base General Plan and HQ ACC Zoning initiative. No changes to transportation or visual resources.	No change in land use status, transportation patterns or visual resources.
Socioeconomics	Short-term beneficial increase in construction employment and spending. No long-term change in employment or expenditures.	Short-term beneficial increase in construction employment and spending. No long-term change in employment or expenditures.	No change in employment or expenditures at the base or within the region.	No change in employment or expenditures at the base or within the region.

Table 2-2. Summary of Potential Environmental Impacts of Proposed Actions, Alternatives, and No-Action Alternatives (cont.)

ALERT AREA EXPANSION (CONT.)				
<i>Resources</i>	<i>Proposed Action</i>	<i>Alternative One</i>	<i>Alternative Two</i>	<i>No Action Alternative</i>
Infrastructure	Proposed construction would lead to small increases in utility demands that can be met by existing suppliers.	Proposed construction would lead to small increases in utility demands that can be met by existing suppliers.	No change in utility use.	No changes to infrastructure would occur.
Cultural Resources	No impacts to historic architectural resources; Memorandum of Agreement (MOA) with State Historic Preservation Office (SHPO) in effect for Alert Hanger. No impacts to traditional or archaeological resources.	No impacts to historic architectural resources; MOA in effect with SHPO for Alert Hanger. No effect on archaeological or traditional resources.	No impacts to historic architectural resources or archaeological resources. No impacts to traditional resources.	No change to historic architectural, archeological, or traditional resources. Existing cultural resources would continue to be managed in accordance with federal laws and Air Force regulations.
Biological Resources	Impacts to wildlife and native habitats would be negligible. No wetlands would be affected. No impacts to federally listed, threatened, or endangered species or critical habitat.	Impacts to wildlife and native habitats would be negligible. No wetlands would be affected. No impacts to federally listed, threatened, or endangered species or critical habitat.	No construction or disturbance proposed under this alternative. Impacts to wildlife and native habitats would be negligible. No impacts to federally listed, threatened, or endangered species or critical habitat.	There would be no changes to existing biological resources since the Alert Area would not be expanded.
Water Resources	Standard construction practices would be instituted and a General Permit for Discharges of Stormwater from Construction Activities would be required as a result of disturbance over 2,500 square feet.	Standard construction practices would be instituted and a General Permit for Discharges of Stormwater from Construction Activities would be required as a result of disturbance over 2,500 square feet.	No construction or disturbance proposed under this alternative.	No change in current operations and no change in water resources.

Table 2-2. Summary of Potential Environmental Impacts of Proposed Actions, Alternatives, and No-Action Alternatives (cont.)

ALERT AREA EXPANSION (CONT.)				
<i>Resources</i>	<i>Proposed Action</i>	<i>Alternative One</i>	<i>Alternative Two</i>	<i>No Action Alternative</i>
Water Resources (cont.)	There is no practicable alternative to development within the 100-year floodplain.	There is no practicable alternative to development within the 100-year floodplain.		
Air Quality	Construction emissions do not exceed <i>de minimis</i> levels; no modifications necessary to Synthetic Minor Permit.	Construction emissions do not exceed <i>de minimis</i> levels; no modifications necessary to Synthetic Minor Permit.	No construction emissions; no modifications necessary to Synthetic Minor Permit	There would be no changes to existing air quality conditions since the Alert Area would not be expanded.
Hazardous Materials and Waste Management	Potential use of hazardous materials and hazardous waste generation during construction. Health and Safety Plan required due to proximity to ERP site OT-38A.	Potential use of hazardous materials and hazardous waste generation during construction. Health and Safety Plan required due to proximity to ERP site OT-38A.	No change in the use of hazardous materials and hazardous waste generation. No ERP sites at alternative location.	No change in use of hazardous materials or generation of hazardous waste.
Safety	Temporary increase in ground safety risk due to construction activities. Construction compatible with airfield development criteria.	Temporary increase in ground safety risk due to construction activities. Construction compatible with airfield development criteria.	No construction or disturbance proposed under this alternative. No change in safety conditions. Use of West Ramp compatible with airfield development criteria.	No change in current operations; no increase in safety consequences.
Noise	Short-term (90-95 dBA) impacts from construction noise. No off-base noise impacts.	Short-term (90-95 dBA) impacts from construction noise. No off-base noise impacts.	No construction or disturbance proposed under this alternative. Use of West Ramp compatible with airfield noise environment.	No change in base noise levels.

Table 2-2. Summary of Potential Environmental Impacts of Proposed Actions, Alternatives, and No-Action Alternatives (cont.)

VISITORS' QUARTERS CONSTRUCTION			
<i>Resources</i>	<i>Proposed Action</i>	<i>Alternative One</i>	<i>No Action Alternative</i>
Land Use, Transportation and Visual Resources	Consistent with Base General Plan and HQ ACC Zoning initiative. Construction of a new Visitors' Quarters would improve the visual character of the site.	Consistent with Base General Plan. Construction of a new Visitors' Quarters would improve the visual character of Nealy Avenue.	No change in land use status, transportation or visual resources.
Socioeconomics	Short-term beneficial increase in construction employment and spending. No long-term change in employment or expenditures.	Short-term beneficial increase in construction employment and spending. No long-term change in employment or expenditures.	No change in employment or expenditures at the base or within the region.
Infrastructure	Proposed construction would lead to minor increases in utility demands that can be met by existing suppliers. Regional landfills have capacity for projected demolition waste.	Proposed construction would lead to minor increases in utility demands that can be met by existing suppliers.	No changes to infrastructure would occur.
Cultural Resources	Area has been surveyed for archaeological resources and no impacts are anticipated. Area is outside of the Langley Field Historic District and no impacts to historic architectural resources or traditional resources are forecast.	Alternative location has been surveyed for archaeological resources and no impacts are projected. Area is outside of the Langley Field Historic District and no impacts are expected to historic architectural resources. No impacts to traditional resources anticipated.	No impacts to cultural resources would occur since the Visitors' Quarters would not be constructed. Existing cultural resources would continue to be managed in accordance with federal laws and Air Force regulations.
Biological Resources	Impacts to wildlife and native habitats would be negligible. No wetlands would be affected. No impacts to federally listed, threatened, or endangered species or critical habitat.	Impacts to wildlife and native habitats would be negligible. No impacts to federally listed, threatened, or endangered species or critical habitat. No wetlands would be affected	There would be no changes to existing biological resources since the Visitors' Quarters would not be constructed.

Table 2-2. Summary of Potential Environmental Impacts of Proposed Actions, Alternatives, and No-Action Alternatives (cont.)

VISITORS' QUARTERS CONSTRUCTION (CONT.)			
<i>Resources</i>	<i>Proposed Action</i>	<i>Alternative One</i>	<i>No Action Alternative</i>
Water Resources	Standard construction practices would be instituted and a General Permit for Discharges of Stormwater from Construction Activities would be required as a result of disturbance over 2,500 square feet. There is no practicable alternative to development within the 100-year floodplain. New stormwater detention pond to be constructed.	Standard construction practices would be instituted and a General Permit for Discharges of Stormwater from Construction Activities would be required as a result of disturbance over 2,500 square feet. There is no practicable alternative to development within the 100-year floodplain. New stormwater detention pond to be constructed.	There would be no changes to existing water resource conditions since the Visitors' Quarters would not be constructed.
Air Quality	Construction emissions do not exceed de minimis levels, however Synthetic Minor Operating Permit modification required for installation of boilers and/or emergency generators.	Construction emissions do not exceed de minimis levels, however Synthetic Minor Operating Permit modification required for installation of boilers and/or emergency generators.	There would be no changes to existing air quality conditions since the Visitors' Quarters would not be constructed.
Hazardous Materials and Waste Management	Potential use of hazardous materials and hazardous waste generation during construction. Potential LBP and ACM resulting from demolition of buildings 74 and 75. Health and Safety Plan required due to proximity to ERP sites LF-05 and OT-64.	Potential use of hazardous materials and hazardous waste generation during construction. Health and Safety Plan required due to proximity to ERP sites OT-06 and OT-64.	No change in use of hazardous materials or generation of hazardous waste would occur since construction would not take place.
Safety	Temporary increase in ground safety risk due to construction activities. Construction compatible with airfield development criteria.	Temporary increase in ground safety risk due to construction activities. Construction compatible with airfield development criteria.	With no construction there would be no increase in safety consequences.
Noise	Short-term (90-95 dBA) impacts from construction noise. No off-base noise impacts.	Short-term (90-95 dBA) impacts from construction noise. No off-base noise impacts.	No change in base noise environment would occur.

Table 2-2. Summary of Potential Environmental Impacts of Proposed Actions, Alternatives, and No-Action Alternatives (cont.)

EOD TRAINING RANGE RELOCATION		
<i>Resources</i>	<i>Proposed Action</i>	<i>No Action Alternative</i>
Land Use, Transportation and Visual Resources	Consistent with Base General Plan and HQ ACC Zoning initiative. Nearby incompatible development restricted due to Explosive Quantity Safety Distance arcs. Base hunting to be restricted during EOD operations. Minor changes to traffic and visual character due to proposed construction.	Without relocation of the EOD Training Range additional development near the Alert Area and at the 1300 Area would not be accomplished.
Socioeconomics	Slight short-term beneficial increase in construction employment and spending. No long-term change in employment or expenditures.	No change in employment or expenditures at the base or within the region.
Infrastructure	Minimal infrastructure support would be met from nearby electrical service.	No changes to infrastructure would occur.
Cultural Resources	Project area has been surveyed and no impacts to archaeological resources are anticipated. Area is outside of Langley Field Historic District and no historic architectural resources would be affected. No impacts to traditional resources are also expected..	No change to historic architectural, archeological, or traditional resources. Existing cultural resources would continue to be managed in accordance with federal laws and Air Force regulations.
Biological Resources	Impacts to wildlife and native habitats would be negligible. Project would avoid nearby wetlands. No impacts to federally listed, threatened, or endangered species or critical habitat.	There would be no changes to existing biological resources since the EOD Training Range would not be relocated.
Water Resources	Standard construction practices would be instituted and a General Permit for Discharges of Stormwater from Construction Activities would be required as a result of disturbance over 2,500 square feet. There is no practicable alternative to development within the 100-year floodplain.	There would be no changes to existing water resources since the EOD Training Range would not be relocated.
Air Quality	Construction emissions do not exceed de minimis levels. No. modifications necessary to Synthetic Minor Permit.	No change in current operations; no changes in air quality.
Hazardous Materials and Waste Management	Potential use of hazardous materials and hazardous waste generation during construction. EOD will certify solid waste as free of explosives prior to disposal Health and Safety Plan required due to proximity to ERP site LF-12 and OT-64	No change in use of hazardous materials or generation of hazardous waste since the EOD Training Range would not be relocated.
Safety	Temporary increase in safety risk during construction. Trained EOD specialists will manage explosive safety issues. No additional risks anticipated from this action.	No change in current operations; no increase in safety consequences.

Table 2-2. Summary of Potential Environmental Impacts of Proposed Actions, Alternatives, and No-Action Alternatives (cont.)

EOD TRAINING RANGE RELOCATION (CONT.)		
<i>Resources</i>	<i>Proposed Action</i>	<i>No Action Alternative</i>
Noise	Sound levels from EOD operations are not expected to cause an increased risk of noise complaints or structural damage due to the small amount of explosives to be used. Short-term (90-95 dBA) impacts from construction noise. No off-base noise impacts anticipated.	No change in base noise levels.
WAR RESERVE MATERIAL AND AIR COMBAT COMMAND REGIONAL SUPPLY PARKING AREA CONSTRUCTION		
<i>Resources</i>	<i>Proposed Action</i>	<i>No Action Alternative</i>
Land Use, Transportation and Visual Resources	Consistent with Base General Plan and HQ ACC approved zoning map. Minor changes to traffic flow and visual character due to proposed construction.	No change in land use status, transportation patterns or visual resources.
Socioeconomics	Slight short-term beneficial increase in construction employment and spending. No long-term change in employment or expenditures.	No change in employment or expenditures at the base or within the region.
Infrastructure	No environmental impacts to infrastructure from parking lot construction.	No changes to infrastructure would occur.
Cultural Resources	Although no archaeological resources have been identified in the surrounding area, no survey has been conducted at the proposed action location. SHPO consultation would be required should artifacts found. Area is outside of the Langley Field Historic District and no impacts are expected to historic architectural resources. No impacts to traditional resources anticipated.	No change to historic architectural resources, archeological resources, or traditional resources. Existing cultural resources would continue to be managed in accordance with federal laws and Air Force regulations.
Biological Resources	Impacts to wildlife and native habitats would be negligible. Project would involve construction of a pedestrian bridge in or near wetlands and a Section 404 permit would be required. Permit authorization would address wetland replacement requirements. Executive Order 11988 requirements for no net loss of wetlands would also be addressed with permit compliance. No impacts to federally listed, threatened, or endangered species or critical habitat are anticipated.	There would be no changes to existing biological resources since the parking area and bridge would not be constructed.
Water Resources	Standard construction practices would be instituted and a General Permit for Discharges of Stormwater from Construction Activities would be required as a result of disturbance over 2,500 square feet. There is no practicable alternative to development within the 100-year floodplain.	No change in current operations and no change in water resources

Table 2-2. Summary of Potential Environmental Impacts of Proposed Actions, Alternatives, and No-Action Alternatives (cont.)

WAR RESERVE MATERIAL AND AIR COMBAT COMMAND REGIONAL SUPPLY PARKING AREA CONSTRUCTION (CONT.)		
<i>Resources</i>	<i>Proposed Action</i>	<i>No Action Alternative</i>
Air Quality	Construction emissions do not exceed de minimis levels; no modifications necessary to Synthetic Minor Permit.	There would be no changes to existing air quality conditions since the parking area would not be constructed.
Hazardous Materials and Waste Management	Potential use of hazardous materials and hazardous waste generation during construction. Health and Safety Plan required due to proximity to ERP sites LF-07 and OT-64.	No change in use of hazardous materials or generation of hazardous waste.
Safety	Temporary increase in ground safety risk due to construction activities. Construction compatible with airfield development criteria.	No change in current operations; no increase in safety consequences.
Noise	Short-term (90-95 dBA) impacts from construction noise. No off-base noise impacts anticipated.	No change in base noise levels.

3.0 AFFECTED ENVIRONMENT

This chapter describes relevant existing environmental conditions at Langley AFB for resources potentially affected by the proposed actions, alternatives, and the No-Action Alternatives described in Chapter 2.0. In compliance with guidelines contained in the NEPA, CEQ regulations, and 32 CFR Part 989, the description of the existing environment focuses on those environmental resources potentially subject to impacts. These resources and conditions are: land use, including transportation and visual; socioeconomics; infrastructure; cultural resources; biological resources; water resources; hazardous materials and waste management; safety; noise; and air quality. The expected geographic scope of potential impacts, known as the region of influence (ROI), is defined for each resource analyzed.

RESOURCES ELIMINATED FROM DETAILED CONSIDERATION

Two resources were not evaluated in this EA because it was determined that implementation of the proposed actions, alternatives, and the No-Action Alternative is unlikely to affect them. A brief explanation of the reasons why these resources have been eliminated from further consideration in this EA is provided below.

Airspace. The proposed actions, alternatives, and the No-Action Alternative do not involve aircraft or airspace modifications.

Environmental Justice. Executive Order (EO) 12898 (*Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*), was issued by the President on February 11, 1994. Objectives of the EO, as it pertains to this document, include identification of disproportionately high and adverse health and environmental effects on low-income populations or minority populations that would be caused by a proposed federal action. Accompanying EO 12898 was a Presidential Transmittal Memorandum that referenced existing federal statutes and regulations, including NEPA, to be used in conjunction with EO 12898.

Environmental justice concerns the disproportionate effect of a federal action on low-income or minority populations. The existence of disproportionately high and adverse impacts depends on the nature and magnitude of the effects identified for each of the individual resources. If implementation of the proposed action were to have the potential to significantly affect people, these effects would have to be evaluated for how they adversely or disproportionately affect low-income or minority communities.

Because the proposed action takes place within the boundaries of the base, and minority or low-income populations would not be significantly affected by implementation of the proposed action and the alternatives, environmental justice was eliminated from further analysis.

3.1 LAND USE, TRANSPORTATION, AND VISUAL RESOURCES

The attributes of land use addressed in this analysis include land use, transportation, and visual resources. Land use focuses on general land use patterns, as well as management plans, policies, ordinances, and regulations. These provisions determine the types of uses that are allowable and identify appropriate design and development standards to address specially

designated or environmentally sensitive areas. Transportation addresses roads and circulation within Langley AFB. Visual resources present the natural and manufactured features that constitute the aesthetic qualities of an area. The ROI for land use resources consists of Langley AFB.

LAND USE

Land uses on Langley AFB are grouped by function in distinct geographic areas. For example, aircraft operations and maintenance facilities are located in the southern portion of the base. The residential areas on base are located along the Back River in the southeastern and northeastern portions of the base.

Adopted plans, programs, and a new HQ ACC base zoning initiative, guide land use planning on Langley AFB. Base plans and studies present factors affecting both on- and off-base land use and include recommendations to assist on-base officials and local community leaders in ensuring compatible development. The *Langley General Plan* (Air Force 2003) provides an overall perspective concerning development opportunities and constraints. Area Development Plans (ADPs), part of the General Plan, provide focused information on the future organization and circulation of personnel, buildings, and equipment within portions of the base. ADPs affected by projects evaluated in this EA include the Alert Area ADP, 1300 Area ADP and the North Base Support ADP.

The base's *Integrated Natural Resource Management Plan* (Air Force 1998a) is used to coordinate natural resource management. Langley's *Urban Forest Inventory Review and Management Plan* (Davey Resource Group 1997) is an important component of this plan. Trees are an integral component of the base's urban environment with their shade and beauty contributing to the quality of life and moderating the hard appearance of concrete structures and streets. Trees also help stabilize the soil by controlling wind and water erosion, reduce noise levels, and cleanse pollutants from the air. Trees also provide significant economic benefits. Several studies have shown that properly placed trees provide shade and act as windbreaks, helping to decrease residential energy consumption. Trees return overall benefits and value far in excess of the time and money invested in them for planting, pruning, care, and removal. Langley AFB leadership have recognized these benefits and realize the need to protect their investment with a comprehensive, urban forest management program.

The Coastal Zone Management Act (CZMA) was enacted to develop a national coastal management program that comprehensively manages and balances competing uses of land impacts to any coastal use or resource. The CZMA federal consistency requirement, CZMA section 307, mandates that federal agency activities be consistent to the maximum extent practicable with the enforceable policies of a state management program. The federal consistency requirement applies when any federal activity, regardless of location, affects any land or water use or natural resource of the coastal zone. The question of whether a specific federal agency activity may affect any natural resource, land use, or water use in the coastal zone is determined by the agency implementing the action.

The Virginia Department of Environmental Quality (VDEQ) oversees activities in the coastal zone of the Commonwealth through a number of enforceable programs. In reviewing the proposed action, alternatives, and No-Action Alternatives, VDEQ may require agencies to coordinate with its specific divisions or other agencies for consultation or to obtain permits; they also may comment on environmental impacts and mitigation. VDEQ enforceable programs and policies pertain to fisheries management, subaqueous lands management, wetlands management, dunes management, non-point source pollution control, point source pollution control, shoreline sanitation, air pollution control, and coastal lands management. The Chesapeake Bay Local Assistance Department regulates activities in the Chesapeake Bay Resource Management Areas and Resource Protection Areas.

TRANSPORTATION

Access to Langley AFB is provided from Interstate 64 (I-64) via Armistead Avenue to the west of the base, and from Mercury Boulevard (United States [U.S.] Route 258/Virginia State Route [SR] 32), via LaSalle Avenue (SR 167) or King Street (SR 278). Langley AFB has a network of streets that provide access to all base facilities. Nealy Avenue begins at the Main Gate and continues northeast through the installation. Sweeney Boulevard is the primary east west corridor linking directly to the West Gate at Armistead Avenue. It has three lanes (center lane reversible) from the gate to the intersection with Nealy Avenue/Hammond Avenue. Parking in some on-base areas is limited. The combination of Ward Road, Clarke Avenue, Weyland Road and Lee Road comprise the “base perimeter road.”

VISUAL RESOURCES

Langley AFB is located in the city of Hampton near the southern end of the lower Virginia Peninsula, between the Northwest and Southwest Branches of the Back River, a branch of the Chesapeake Bay. The base is in the Coastal Plain physiographic province on Hampton Flat, a nearly flat plain that gently slopes toward the east, with elevations between 5 and 11 feet above mean sea level (MSL).

The main base occupies 2,883 acres of the total site. The largest structures on base are the aircraft operations and maintenance facilities located in the southern portion of the base. NASA operates a facility complex in the northwestern, southern, and southeastern portion of the base. The large wind tunnels and aeronautical test equipment that comprise the NASA facility resemble a large industrial area. A number of older buildings on base, such as the Albert Kahn-designed hangars, give the base a character reflecting its history as an important airbase from the beginning of the aviation era.

Much of the vegetation on base was planted at the time of the base’s original construction (circa 1916). Towering oak trees are the dominant species of trees in the Langley Field Historic District. They have been used mainly as street plantings and as decorative plantings around many buildings. Significant trees are a part of the historic character of the base; therefore, standard landscaping practices would be used to alleviate harming the trees as much as possible.

3.2 SOCIOECONOMICS

3.2.1 Socioeconomics

The socioeconomic resources of the potentially affected region, represented as the ROI, are characterized in terms of population and housing, economic activity, community services, and infrastructure. Because these resources would be interrelated in their response to the proposed actions at Langley AFB, their current condition is assessed in order to provide a basis for analyzing potential socioeconomic impacts. A change in employment, for example, may lead to population movements into or out of a region and, in turn, lead to changes in demand for housing and public services. The significance of these estimated impacts is then evaluated by comparing their characteristics to the baseline conditions described in this section.

Langley AFB is located in Hampton, Virginia, in a large metropolitan area made up of independent cities and counties in the southeast corner of Virginia. The entire area, which is known as Hampton Roads, is divided by the James River into two geographic regions. The northern portion is called the Virginia Peninsula and the southern portion is called South Hampton Roads.

Virginia is unique in that cities that have reached a certain size become independent governmental jurisdictions from the counties in which they are geographically located. The Virginia Peninsula is made up of the counties of James City, Gloucester, Matthews, and York and the independent cities of Williamsburg, Newport News, Poquoson, and Hampton. South Hampton Roads includes Isle of Wight County and the independent cities of Norfolk, Suffolk, Portsmouth, Chesapeake, and Virginia Beach. The center of the area, in which Langley AFB is situated, is highly urbanized, while the outer regions tend to be more rural.

The ROI for this analysis includes York County and the independent cities of Hampton, Newport News, and Poquoson, which are the areas surrounding Langley AFB. It is expected that any potential socioeconomic impacts of the proposed action would be concentrated in this region.

POPULATION AND HOUSING

The 2000 Census established the ROI population as 394,450 persons, an increase of 10.4 percent from the 1990 population of 357,265 (see Table 3.2-1). By 2003, population in the ROI had grown to 401,317 persons, a 1.7 percent increase since 2000. The current population in the ROI accounts for 5.6 percent of the Virginia population of 7.4 million persons.

Population density in the ROI is 1,630 persons per square mile, ranging from 533 persons per square mile in York County to over 2,800 persons per square mile in the City of Hampton. Overall, the state has a population density of 179 persons per square mile. The combined regional population is projected to increase at an average annual rate of 0.5 percent, reaching 414,500 persons by the year 2010. By the years 2020 and 2030, the population of the region is expected to grow to 432,000 and 449,300 persons, respectively.

Table 3.2-1. Regional Demographics

	<i>Hampton</i>	<i>Newport News</i>	<i>Poquoson</i>	<i>York County</i>	<i>ROI</i>
2003 Population	146,878	181,647	11,844	60,948	401,317
2000 Population	146,437	180,150	11,566	56,297	394,450
1990 Population	133,793	170,045	11,005	42,422	357,265
Population Density	2828.0	2637.9	745.4	532.9	1630.0
2010 Projection	149,600	184,100	12,000	68,800	414,500
2020 Projection	152,600	187,100	12,300	80,000	432,000
2030 Projection	155,600	190,100	12,600	91,000	449,300
<i>Sources:</i> U.S. Bureau of Census 2000, 2004; VEC 2003.					

Based on Langley AFB population figures for FY 2002, the base-related population amounts to approximately 26,845 individuals (see Table 3.2-2). of this total, 18,539 persons are military and family members, and the remaining 8,306 persons are civilian employees and family members. Information regarding military retirees residing in the region was not available. The total Langley AFB population represents 6.7 percent of the ROI population.

Table 3.2-2. Langley AFB Population

	<i>September 2002</i>
Military assigned	8,470
Living on-base	1,373
Living off-base	7,097
Military family members	10,069
Living on-base	6,244
Living off-base	3,825
Civilians	8,306
Appropriated fund civilians	2,074
Other civilians ¹	1,037
Civilian family members ²	5,195
<i>Notes:</i> 1. This figure represents non-appropriated fund contract civilians and private business. 2. This figure calculated based on Census average household size for the ROI.	
<i>Source:</i> USAF 2002.	

According to the 2000 Census, there were 156,429 housing units in the ROI, of which 147,739 were occupied (see Table 3.2-3). An estimated 83,916 of the occupied units (57 percent) were owner-occupied, while the remaining 63,823 (43 percent) were renter-occupied. The vacancy rate in the ROI is 5.56 percent compared to 7.06 percent in the state. Approximately one-quarter

of the 8,690 vacant homes are recreation homes, seasonal homes, and other housing classifications. Over one-third of the housing in the ROI is located in Hampton (37 percent), with Newport News accounting for almost half (47 percent). The median value of housing units in 2000 ranged from a low of \$91,100 in Hampton to a high of \$153,400 in Poquoson, compared to the state median home value of \$125,400.

Table 3.2-3. Housing Characteristics

	<i>Hampton</i>	<i>Newport News</i>	<i>Poquoson</i>	<i>York County</i>	<i>ROI</i>
Total Housing Units	57,311	74,117	4,300	20,701	156,429
Occupied Units	53,887	69,686	4,166	20,000	147,739
Vacancy Rate	5.97 %	5.98 %	3.12 %	3.39 %	5.56 %
Ownership Rate	58.6 %	52.4 %	84.1 %	75.8 %	58.6 %
Average Household	2.49	2.50	2.75	2.78	2.67
Median Value	91,100	96,400	153,400	152,700	--
<i>Sources: Census 2000</i>					

There are approximately 3,000 on-base housing units at Langley AFB, including both military family housing (MFH) units and unaccompanied personnel housing (UPH) units. The UPH inventory includes permanent party dormitory space, visiting officer quarters, and visiting airmen quarters.

ECONOMIC ACTIVITY

The regional economy has been expanding since the last recession in 1991; however it began to slow in 2001 and 2002. Employment in the region has been growing at 2.3 percent annually over the past twenty years, slightly higher than the national rate (HRPDC 2003). The military and defense contractors, including those on and associated with Langley AFB, provide a significant portion of Hampton and Newport News employment. The Hampton Roads region, which includes the ROI, has one of the most highly concentrated military populations in the U.S., with military employment comprising 11.5 percent of total regional employment.

Langley AFB is a major consumer in the local economy, not only due to the purchase of goods and services to support its day-to-day operations, but also because of the household spending of its military and civilian personnel and their families. Besides purchases and wages, Langley AFB is responsible for other economic activity in the ROI. Federal impact funds are provided to defray some of the community educational costs for military dependents receiving education in the civilian community. In addition, many military and DoD civilian retirees and their families live in the region, with their retirement pay contributing to the local economy.

EMPLOYMENT

The most recent labor market information indicates that the civilian labor force in the ROI stands at 200,138 (see Table 3.2-4). The civilian labor force grew 11.9 percent during the 1990s,

and has grown an additional 6.0 percent since the year 2000. The 2004 regional unemployment rate is 4.5 percent, compared to the state unemployment rate of 3.6 percent. In 1990, the regional unemployment rate was 5.0 percent, and declined over the decade to a low of 2.5 percent in 2000.

Table 3.2-4. Labor Market Information

	<i>Hampton</i>	<i>Newport News</i>	<i>Poquoson</i>	<i>York County</i>	<i>ROI</i>
Labor Force 2004	74,038	88,997	6,436	30,667	200,138
2000	70,593	84,242	6,128	27,880	188,843
1990	63,667	79,447	--	25,672 ¹	168,789
Unemployment 2004	4.7 %	5.1 %	2.8 %	2.6 %	4.5 %
2000	2.7 %	2.8 %	1.7 %	1.6 %	2.5 %
1990	5.3 %	5.3 %	--	3.4 % ¹	5.0 %
<i>Notes:</i> 1. 1990 Data for York County includes data for the City of Poquoson. <i>Source:</i> VEC 2004.					

Employment in the region amounted to 169,143 jobs in 2003 (see Table 3.2-5). The services industry is by far the largest employment sector, accounting for 37.0 percent of regional employment. Government and government enterprises contribute 19.8 percent of all jobs in the ROI.

Table 3.2-5. Employment by Industry (2003)

	<i>Hampton</i>	<i>Newport News</i>	<i>Poquoson</i>	<i>York County</i>	<i>ROI</i>
Natural Resources & Mining	0	1	*	19	20
Construction	2,401	3,906	187	2,119	8,613
Trade	8,978	11,915	340	3,096	24,329
Transportation & Utilities	613	2,424	*	242	3,279
Manufacturing	3,680	22,285	24	595	26,584
Information	1,778	2,099	0	65	3,942
Financial	1,752	3,770	75	660	6,257
Services	22,263	32,663	619	7,126	62,671
Government	15,143	13,877	524	3,904	33,448
TOTAL EMPLOYMENT	56,608	92,940	1,769	17,826	169,143
<i>Notes:</i> * Denotes non-disclosed data. <i>Source:</i> VEDP 2004.					

Of total government employment, approximately 40 percent are military, 20 percent are federal civilians, and 40 percent are state and local government employees. Manufacturing is the third largest sector in the region, accounting for 15.7 percent of total employment.

Personnel associated with Langley AFB total 11,581 employees in FY 2002 (Air Force 2002). Military personnel account for 8,470 jobs and appropriated fund civilians account for 2,074 jobs. Other civilians, including non-appropriated fund civilians, BX/commissary employees, branch bank/credit union employees and other concessionaires, account for the remaining 1,037 jobs. Additional private contracted personnel may contribute to total base employment. Economic activity generated by Langley AFB supports an estimated 6,195 indirect jobs in the region, with an average annual earnings impact of \$185 million.

INCOME AND EXPENDITURES

Earnings in the ROI totaled approximately \$7 billion in 2002 (BEA 2004). The distribution of earnings across industries is essentially the same as the distribution of employment, with services and government representing the largest income producers. Earnings per job ranged from \$24,345 in York County to \$36,991 in Newport News, with average earnings per job in the ROI of \$35,328 (see Table 3.2-6). Median family income in the ROI in 2000 ranged from \$36,597 in Newport News to \$60,920 in Poquoson (Census 2000). Per capita income was \$19,738, almost 20 percent lower than the state per capita income of \$23,975.

Table 3.2-6. Earnings and Income

	<i>Hampton</i>	<i>Newport News</i>	<i>Poquoson</i>	<i>York County</i>	<i>ROI</i>
Median Family Income	\$39,532	36,597	60,920	57,956	--
Per Capita Income	19,774	17,843	25,336	24,560	19,738
Earnings per Job	36,991	36,915	-- ¹	24,345	35,328
Poverty Rate	11.3	13.8	4.5	3.5	11.1
<i>Notes:</i> 1. Job earnings data for City of Poquoson included in York County.					
<i>Source:</i> Census 2000, BEA 2004.					

In FY 2002, total payrolls associated with the 11,581 military and federal civilian personnel amounted to \$600 million (see Table 3.2-7). Other expenditures during FY 2002 included \$128 million in construction costs, \$134 million for service contracts, \$7 million in impact aid and tuition assistance, and \$9 million in health-related expenditures. Total Langley AFB expenditures in FY 2002 amounted to \$1.1 billion.

Table 3.2-7. Langley AFB Payroll and Expenditures (FY 2002)

	<i>Annual Payroll and Expenditures (in millions)</i>	
	<i>Subtotal</i>	<i>Total</i>
Annual Payroll		\$ 599.5
Military	\$ 447.9	
AF Civilians	136.1	
NAF and other Civilians	15.5	
Expenditures		\$ 538.1
Construction	\$ 127.6	
Services	133.6	
Materials, Equipment, Supplies	276.9	
Total Payroll and Expenditures		\$ 1,137.6
<i>Source: USAF 2002.</i>		

3.3 INFRASTRUCTURE

The utility infrastructure at Langley AFB consist of on-base distribution systems for electrical, natural gas, potable water, sewage, solid waste and liquid fuels. The ROI for this resource is defined as Langley AFB.

3.3.1 Electrical and Natural Gas Distribution

Currently, Langley AFB is in the process of installing phase three of a three phase contractor owned and maintained electrical distribution system. This new and improved system will include the construction of a new 8-mile direct buried underground 34.5-kilovolt (kV) loop express feeder system. Additionally, ten new transformers, (5 megavolt-amp [MVA] each), and associated electrical switching devices will be installed. These improvements will assure adequate and reliable electrical service to the facilities proposed in this action.

Virginia Natural Gas provides natural gas to Langley AFB through an underground main that extends along Sweeney Boulevard. The natural gas system is adequate to meet existing and short-term projected demand.

3.3.2 Potable Water

The Langley AFB water system is classified by the Virginia Department of Health as a community water system (Public Water Supply ID Number VA3650305). A community water system is defined as “a waterworks which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.”

Langley AFB’s sole potable water source is the Newport News Waterworks. Langley AFB has several non-potable water sources that can be used for contingency purposes. Three potable water treatment facilities, Harwood’s Mill Water Treatment Plant (WTP), Lee Hall WTP, and a reverse osmosis well field currently make up the Newport News Waterworks with a maximum production capability of 108 million gallons per day (MGD).

There are three potable water storage tanks available at Langley AFB. Tank 1374 is currently in use and the remaining two tanks (66 and 1000) are off line. The total active tank storage capacity of the Langley AFB system is 2.5 million gallons (Air Force 2003). Potable water demand at Langley AFB has varied from 0.90 MGD to 1.20 MGD during FY 1999 – FY 2002.

The base Capital Improvement Plan contains several storage tank, pump station, and distribution system improvements during the next several years. Once these improvements are brought on line the base will be able to more fully utilize storage capacity, operate the distribution system at higher pressures, and will provide enhanced water system reliability.

3.3.3 Sewage

Wastewater generated at the base is discharged through the sanitary sewer system to the Hampton Roads Sanitation District (HRSD). The base has an HRSD Industrial Wastewater Discharge Permit (No. 0011) effective through 1 October 2006 that regulates the amount of pollutants that can be discharged to the sanitary sewer system.

3.3.4 Solid Waste

Solid waste generated on Langley AFB is removed by contract services to either the City of Hampton's Bethel Sanitary Landfill or to the Hampton Waste-to-Energy facility for incineration. In FY 2002, the base generated 8,021 tons of solid waste and diverted 1,830 tons through recycling and composting activities. The base also generated 4,707 tons of construction and demolition debris and was able to recycle 566 tons of the debris. Big Bethel is a sanitary landfill, but also accepts construction and demolition waste. In 2001, this facility received 447,623 tons of waste of all types. With a total capacity of about 24,654,982 tons, it has a remaining useful life of about 55 years (Commonwealth of Virginia Department of Environmental Quality 2004). In addition, there are five dedicated construction/demolition waste disposal landfills in the Hampton Roads area (Table 3.3-1). Their combined capacity is 24,558,463 tons. These facilities together received 2,968,610 tons of construction and demolition waste in 2001, and have a collective remaining useful life of about 8.3 years.

Table 3.3-1. Capacity, Disposal Rates, and Remaining Useful Life (RUL) for Construction-Demolition Waste Disposal Facilities in Hampton Roads

<i>Name</i>	<i>Permit</i>	<i>County</i>	<i>Capacity (tons)</i>	<i>2001 Disposal (tons)</i>	<i>RUL</i>
Debris Landfill Indian Trail Disposal Facility	451	Suffolk	178,888	87,396	2.0
Higgerson-Buchanan Inc.	493	Chesapeake	518,256	103,651	5.0
Thrasher CDD Landfill	305	Chesapeake	150,000	132,776	1.1
Waltrip Landfill	322	James City	12,000	3,514	3.4
Wolftrap Operations Inc. Debris Landfill	436	York	116,713	58,220	2.0
Total for Hampton Roads			975,857	385,666	2.51
Total for Virginia			24,558,463	2,968,610	8.3
<i>Note:</i> 1. This is the combined (average) RUL for the five facilities, not the sum of their individual Rules. <i>Source:</i> Commonwealth of Virginia Department of Environmental Quality, June 2004					

3.3.5 Liquid Fuels

The Liquid Fuel System at Langley AFB includes facilities for receiving, storing, and distributing JP-8 jet fuel. This fuel is delivered by barge to the base and offloaded at the Fuel Pier (Facility 721) through off-loading arms. Fuel is piped from the piers to six aboveground storage tanks (Facility 707), which have a combined capacity of 2,835,663 gallons.

When fuel is needed, it is pumped to six truck fill-stands, which have a combined capacity of 3,400 gallons, and four of the six stands have +100 injectors. A truck off-loading header also exists with a capacity of 500 gallons. All fuel is delivered to aircraft by refueling vehicles.

In May 2003, the Type I Hydrant Fueling System on the West Parking Apron was dismantled. The pump house was removed and the tanks were abandoned in place due to their age, limited capacity, and planned construction in the area.

3.4 CULTURAL RESOURCES

Cultural resources are any prehistoric or historic district, site, or building, structure, or object considered important to a culture, subculture, or community for scientific, traditional, religious or other purposes. They include archaeological resources, historic architectural resources, and traditional resources. Archaeological resources are locations where prehistoric or historic activity measurably altered the earth or produced deposits of physical remains (e.g., arrowheads, bottles). Historic architectural resources include standing buildings, dams, canals, bridges, and other structures of historic or aesthetic significance. Traditional resources are associated with cultural practices and beliefs of a living community that are rooted in its history and are important in maintaining the continuing cultural identity of the community. Historic properties (as defined in 36 CFR 60.4) are significant archaeological, architectural, or traditional resources that are either eligible for listing, or listed in, the National Register of Historic Places (NRHP). Both historic properties and significant traditional resources identified by American Indian tribes are evaluated for potential adverse impacts from an action.

The ROI for cultural resources is the area within which the proposed action has the potential to affect existing or potentially occurring cultural resources. For the proposed action and alternatives, the ROI is defined as Langley AFB.

3.4.1 Existing Conditions

IDENTIFIED CULTURAL RESOURCES

There are five National Historic Landmarks on Langley AFB, all of which were designated on the merit of their contributions to the aeronautics and space program between 1915 and 1972. They include three wind tunnels and two training facilities (LARC 2005).

Archaeological surveys at Langley AFB have examined 821 acres (28 percent) of the base, locating a total of 18 archaeological sites (USACE 2004, Air Force 2004a). The NRHP-eligible Langley Field Historic District encompasses the eastern part of the base including the Lighter than Air (LTA) and Heavier than Air (HTA) areas. It includes nearly 250 contributing and non-contributing historic properties. No Langley WINDO projects occur within the proposed

district. Of those facilities associated with the present project, Building 1362 Alert Hangar has been evaluated as eligible for the NRHP (Air Force 2004b). Langley AFB and the Virginia State Historic Preservation Office (SHPO) have executed a Memorandum of Agreement (MOA) (Appendix C) stipulating a number of actions if the Alert Hangar is renovated. Table 3.4-1 lists the facilities associated with the proposed action.

Native American resources were discovered during a 2004 Cultural Resources Survey; however none of these projects will impact those resources (USACE 2004). No federally recognized Indian tribes or lands are located in Virginia.

Table 3.4-1 Facilities Proposed for Demolition, Relocation, or Rehabilitation

<i>Facility #</i>	<i>Facility Name</i>	<i>Construction Date</i>	<i>Proposed Action</i>	<i>National Register Status</i>	<i>Associated Project</i>
74	Air Force Clinic	1957	Demolition	Not Eligible	Visitors' Quarters Construction
75	Airmen Dormitory	1957	Demolition	Not Eligible	Visitors' Quarters Construction
335	Gas and diesel refueling station	Unknown	Resiting	Not Eligible	Government Fuel Station Relocation
1362	Alert Hangar	1953	Replacement of hangar roof and doors	Eligible	Alert Area Expansion

3.5 BIOLOGICAL RESOURCES

For purposes of the impact analysis, biological resources are divided into three major categories: (1) terrestrial communities, (2) wetland and freshwater aquatic communities, and (3) threatened, endangered, and special status species/communities. The ROI for biological resources includes Langley AFB and the specific areas associated with the proposed actions and alternatives.

3.5.1 Existing Conditions

TERRESTRIAL COMMUNITIES

Only a relatively small portion of Langley AFB is forested or remains in its natural state. Plant communities include approximately 250 acres of mixed oak-hickory hardwood forests, 60 acres of 60-year-old planted loblolly pine forests, 450 acres of tidal salt marshes, and an undetermined amount of old-field successional areas. The remaining portions of the base consist of managed lawns and developed areas of buildings, structures, and pavement.

Wildlife on the base are widespread species that are habitat generalists or tolerant of disturbance. This includes a wide variety of game and furbearing species, small mammals, waterfowl, songbirds, raptors, amphibians, reptiles, and fish. The proximity of the base to estuarine and marine habitats of Chesapeake Bay provides habitat for a variety of neotropical migrants and waterfowl.

WETLAND AND FRESHWATER AQUATIC COMMUNITIES

Wetlands are areas of transition between terrestrial and aquatic systems where the water table is usually at, or near, the surface, or the land is covered by shallow water (USFWS, 1979).

Wetlands are often categorized by water patterns (the frequency or duration of flooding) and location in relation to upland areas and water bodies. Wetland hydrology is considered one of the most important factors in establishing and maintaining wetland processes (Mitsch, 2000).

Wetlands are defined in the U.S. Army Corps of Engineers *Wetlands Delineation Manual* as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (USACE, 1987). These resources are protected under Section 404 of the Clean Water Act (33 United States Code Section 1344) and at the State level under Section 401 pursuant to Chapter 13 of Title 28.2, Code of Virginia. Wetlands on federal lands are further protected under Executive Order 11990, which states "...each federal agency shall provide leadership and shall take action to minimize the destruction, loss or degradation of wetlands....".

Langley AFB supports a total (influenced by seasonal fluctuations) of 652 acres of wetlands, of which 462 acres are Estuarine emergent wetlands and 190 acres are Palustrine emergent wetlands (Air Force, 1998). Wetlands are very beneficial because of their ability to store and filter stormwater, provide habitat, and naturally control shoreline and stream bank erosion. These areas are usually characterized by poorly-drained soils and exhibit vegetation characteristics of wet environments. A wetland delineation of the entire base was conducted in late 2000 and verified by the USACE-Norfolk District on January 22, 2004 under Project Number 01-R-2076 (Air Force, 2001a; USACE, 2004). This study revealed the various Emergent (saline/brackish/freshwater), Scrub/Shrub, and Forested wetland systems at Langley AFB. Wetland and freshwater aquatic communities are depicted in Figure 3-1.

Langley AFB has restored and stabilized portions of the shoreline adjacent to Northwest and Southwest Branches of Back River using non-invasive, emergent vegetation such as saltmarsh cordgrass (*Spartina alterniflora*) and saltmeadow cordgrass (*Spartina patens*) (personal communication Goss 2005). The Willoughby Point Area was not included in this project. This restoration effort would likely result in a more erosion-resistant shoreline, improve water quality, and promote the unique Estuarine ecosystem of Chesapeake Bay.

3.5.2 Threatened, Endangered, and Special Status Species

Twenty special status species that have the potential to occur, on Langley AFB and are presented in Table 3.5-1. Fifteen have special state status and thirteen have additional federal status. No critical habitat occurs on base and the presence of federally listed threatened and endangered species are not known to occur at Langley AFB.

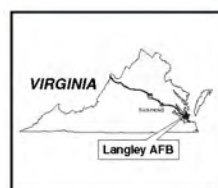
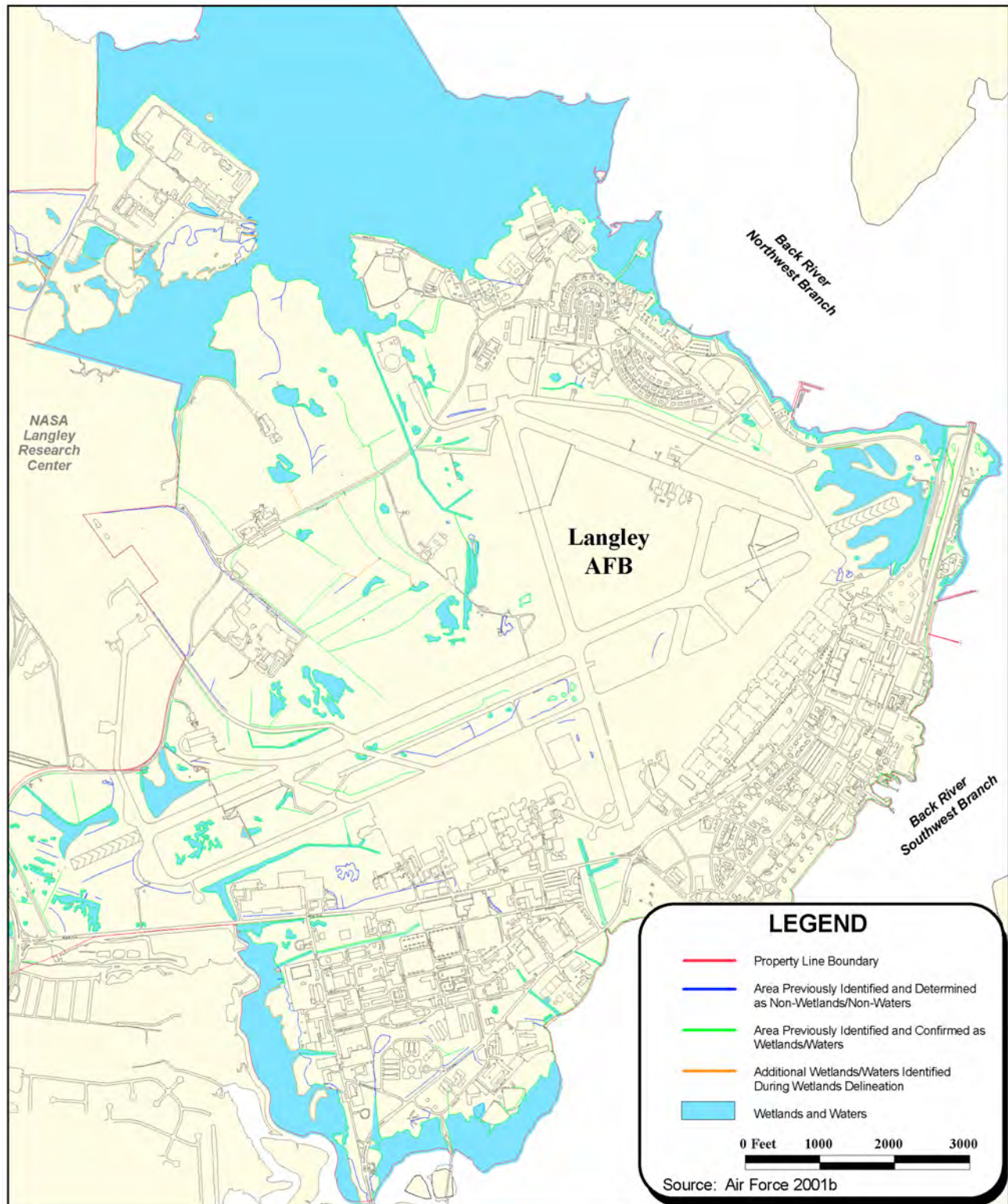


Figure 3-1.
Langley AFB Wetlands Map



**Table 3.5-1. Threatened, Endangered, and Special-Status Species
that Potentially Occur on Langley AFB**

<i>Species</i>	<i>Status</i>	<i>Areas of Occurrence</i>
REPTILES		
Canebrake rattlesnake <i>Crotalus horridus atricaudatus</i>	SE	Meadows, canebrake or “green sea” wetlands. At risk because of wetland loss. Swampy areas, canebrake thickets, and floodplains
Kemp’s Ridley sea turtle <i>Lepidochelys kempii</i>	FE/SE	Atlantic Coast and throughout the Chesapeake Bay, shallow near-shore grass beds
Leatherback sea turtle <i>Dermochelys coriacea</i>	FE/SE	Atlantic Coast and mouth of Chesapeake Bay and estuarine rivers
Loggerhead sea turtle <i>Caretta caretta</i>	FT/ST	Atlantic Coast and mouth of Chesapeake Bay and estuarine rivers and marshes
Green sea turtle <i>Chelonia mydas</i>	FT/ST	Shallow waters of lower Chesapeake Bay, sea grass flats
Northern diamond-backed terrapin <i>Malaclemys terrapin terrapin</i>	FS	Prefers the brackish water of estuaries, tidal marshes, and the tidal portions of rivers. It is sometimes seen in the Atlantic Ocean. Nesting occurs on sandy beaches or dunes
BIRDS		
Bald eagle <i>Haliaeetus leucocephalus</i>	FT/SE	Forages occasionally on base. Nests within three miles of the base.
Black rail <i>Laterallus jamaicensis</i>	FS	Prefers dry fields but shares salt marsh meadows with waterfowl, also found along inland tidal creeks and marshes
Cerulean warbler <i>Dendroica cerulean</i>	FS	Breeds in swamps and bottomlands, prefers open stands of tall trees along riverbanks or dense deciduous forests with little undergrowth
Peregrine falcon <i>Falco peregrinus</i>	SE	Observed foraging over salt marshes on base. Open wetlands near cliffs.
Piping plover <i>Charadrius melodius</i>	FT/ST	Prefers areas with expansive sand or mudflats (for foraging) in close proximity to a sand beach (for roosting). Fifty-two designated critical habitat units from North Carolina south to northern Florida along mainland beaches and barrier islands.
Loggerhead shrike <i>Lanius ludovicianus</i>	ST	Prefers open short leafed grasslands with an abundance of perching sites such as fences, woody vegetation or hedgerows. Usually nests in Eastern Redcedar or Hawthorne.
Migrant loggerhead shrike <i>Lanius ludovicianus migrans</i>	FS/ST	Prefers open short leafed grasslands with an abundance of perching sites such as fences, woody vegetation or hedgerows. Usually nests in Eastern Redcedar or Hawthorne.
Upland sandpiper <i>Bartramia longicauda</i>	ST	Breeds in open pastures or grassy fields, often hayfields, alfalfa or clover, occasionally in open forests. Needs extensive grass areas with grasses being 1-3 feet high.

**Table 3.5-1. Threatened, Endangered, and Special-Status Species
that Potentially Occur on Langley AFB (continued)**

<i>Species</i>	<i>Status</i>	<i>Areas of Occurrence</i>
FISH		
Atlantic sturgeon <i>Acipenser oxyrinchus</i>	FS/SS	Juvenile Atlantic Sturgeon may spend several years in fresh water of some large rivers, while others may move downstream to brackish waters when temperatures drop in the fall. Breeds in near shore waters with solid substrates with depths of less than 20 meters.
PLANTS		
Harper's fimbriatilis <i>Fimbristylis perpusill</i>	SE	Coastal seasonal ponds.
Virginia least trillium <i>Trillium pusillum</i> var. <i>virginianum</i>	FS	Forested wetlands and mesic woods including the "green sea" wetlands. Recorded from the City of Hampton.
INVERTEBRATES		
Northeastern beach tiger beetle <i>Cicindela dorsalis dorsalis</i>	FT	Broad beaches with well-developed sand dunes.
AMPHIBIANS		
Barking treefrog <i>Hyla gratiosa</i>	ST	Breeds in coastal seasonal freshwater ponds. Needs fish-free breeding habitat. Base at northern edge of range. Spends warm months in treetops, seeks moisture during dry periods by burrowing among tree roots and clumps of vegetation.
Mabee's salamander <i>Ambystoma mabeei</i>	ST	Breeds in coastal seasonal freshwater ponds. Needs fish-free breeding habitat. Tupelo and cypress bottoms in pine woods, open fields, and lowland deciduous forest.
<i>Notes:</i> FE = Federal Endangered SE = State Endangered FT = Federal Threatened ST = State Threatened FS = Federal Species of Concern SS = State Species of Concern <i>Source:</i> Virginia Fish and Wildlife Information Service, 2005.		

Langley AFB provides habitat for one federally listed threatened species: the bald eagle. Surveys conducted in 1993 and 1994 indicated that foraging by bald eagles occurs to a limited extent within creeks and marshes of the base. Habitat suitable for nesting or roosting occurs among the loblolly pines on the northern side of the base, but no nesting or long-term roosting has ever been observed. Uniform age/size structure of loblolly pine stands may limit use of the base as nesting or roosting habitat (Barrera 1995). The second federally listed threatened species, the northeastern beach tiger beetle, has no record of occurrence on base; it typically inhabits broad sandy beaches and has become a species of concern within the Chesapeake Bay ecosystem. The third federally listed threatened species, the piping plover, is associated with sandy beaches, which are not found on Langley AFB.

Virginia special status species include the barking treefrog, canebrake rattlesnake, Foster's tern, glossy ibis, great egret, Harper's fimbriatilis, least tern, Mabee's salamander, night-heron yellow-crowned, and the peregrine falcon. The Canebrake rattlesnake has been found along the shore of the southwest branch of the Back River.

The following federal and commonwealth agencies were consulted concerning threatened, endangered, and special status species. These agencies included the USFWS, Virginia Field Office, the Virginia Department of Game and Inland Fisheries; and the Department of Conservation and Recreation, Division of Natural Heritage.

3.6 WATER RESOURCES

Water resources include surface and groundwater features located within the base as well as watershed areas affected by existing and potential runoff from the base, including floodplains. Water supply to the base is addressed in section 3.2. The ROI is defined as the base and the waters surrounding the base.

3.6.1 Existing Conditions

Langley AFB occupies a flat lowland peninsula with a gentle eastward slope of 1 foot per mile and elevations of 5 to 11 feet MSL within the Atlantic Coastal Plain physiographic province. The base is bounded on the northeast side by the Northwest Branch of the Back River, and on the southeast side by the Southwest Branch of the Back River, which flow into the Chesapeake Bay. Storm water drainage is carried by a series of pipes, box culverts, and open ditches to 53 outfalls with 26 outfalls associated with areas that contain industrial operations. The base has been issued a Virginia Pollutant Discharge Permit (No. VA0083194) that expires on May 2, 2010. This permit identifies effluent limitations and requires quarterly sampling and management of runoff.

In the Langley AFB area, groundwater occurs in a shallow water table aquifer, an upper artesian aquifer system, and the principal artesian aquifer system. All three aquifers in this area contain water of moderate to poor quality due to high salinity and total dissolved solids; they have little or no potential for a conventional water supply (Air Force 2000a).

Due to its proximity to the Back River and the Chesapeake Bay, much of Langley AFB lies within the 100-year floodplain. Langley AFB is susceptible to high tide surges during storms and spring tides, and flooding is sometimes severe on the base. Figure 3-2 illustrates the extent of the 100-year floodplain on Langley AFB.

The proposed actions and the alternatives evaluated in this EA are located in the 100-year floodplain. An examination of Figure 3-2 indicates that there are no alternative locations available within the cantonment area that is above the 100-year floodplain. Areas above the 100-year floodplain are located within the clear zone on the western end of the runway and at a few small locations on the north side of the base, away from existing infrastructure.

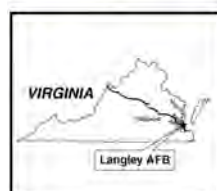
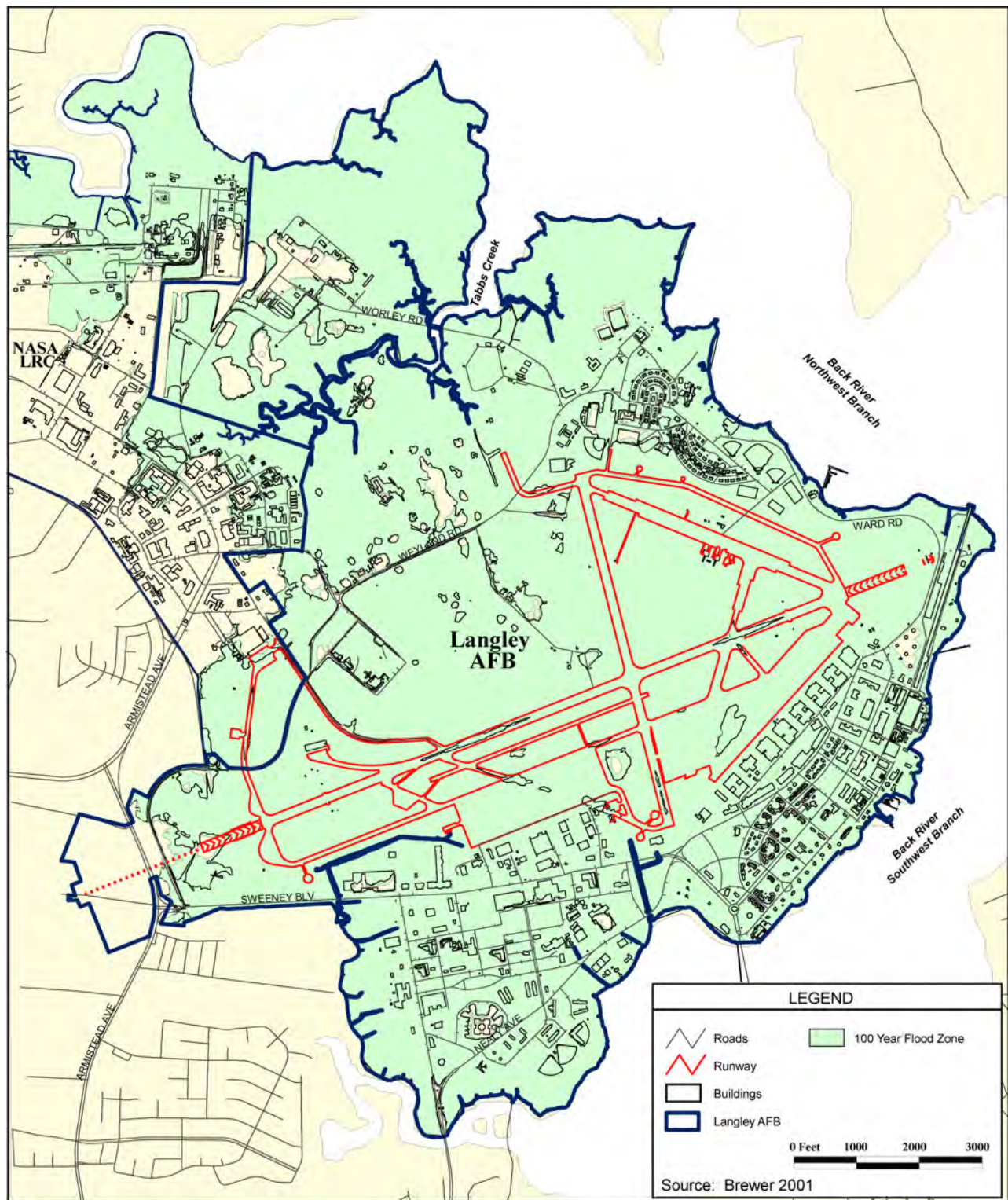
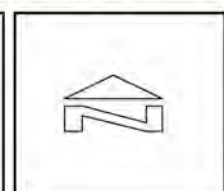


Figure 3-2

Langley AFB Floodplain Map



3.7 AIR QUALITY

Air quality is described by the atmospheric concentration of six pollutants: ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), sulfur dioxide (SO₂), particulate matter equal to or less than 10 microns in diameter (PM₁₀), and lead (Pb). Langley AFB is located within the Hampton Roads Intrastate Air Quality Control Region (AQCR) #223 and is considered the ROI for this resource.

Hampton Roads AQCR includes four counties (Isle of Wright, James City, Southampton, and York), as well as nine independent cities (Chesapeake, Hampton, Newport News, Norfolk, Poquoson, Portsmouth, Suffolk, Virginia Beach, and Williamsburg). This area includes substantial industry, several military and commercial airfields, and a large population that generates emissions. Table 3.7-1 summarizes the baseline emissions (stationary and mobile) of criteria pollutants and precursor emissions for this AQCR. Baseline Langley AFB emissions are incorporated into these totals for the AQCR.

Table 3.7-1. Baseline Emissions for Langley AFB Affected Environment

<i>Emissions</i>	<i>Pollutants (tons per year)</i>				
	CO	VOCs	NO _x	SO ₂	PM ₁₀
Hampton Roads AQCR ¹	257,325	79,750	83,560	110,220	49,860
Langley AFB ²	768.09	115.18	283.38	6.47	10.29
---Stationary Sources	7.19	10.68	42.18	0.87	2.09
---Mobile Sources	760.9	104.5	241.2	5.6	8.2
<i>Sources:</i> 1. Federal Register (629123) June 26, 1997; 2. Air Force 2005;					

3.7.1 Existing Conditions

For each criteria pollutant, Langley AFB contributes less than 1 percent of regional emissions. The base has been issued a Synthetic Minor operating permit from VDEQ Title V program.

Air quality in Hampton Roads AQCR is currently designated as attainment for all criteria pollutants except ozone. For ozone and its precursor pollutants (volatile organic compounds [VOCs] and NO_x) under the United States Environmental Protection Agency's (USEPA) 1-hour National Ambient Air Quality Standard (NAAQS), the affected area is considered in "transitional attainment" or "maintenance." On April 15, 2004, the USEPA designated the City of Hampton as marginal nonattainment for the newly established 8-hour O₃ standard effective as of June 15, 2004. The USEPA will revoke the 1-hour O₃ standard in June 2005 (USEPA 2004a). On December 17, 2004, the USEPA designated the Hampton Roads AQCR as attainment for the newly developed standard for particulates less than 2.5 micrometer in diameter (PM_{2.5}).

3.8 HAZARDOUS MATERIALS AND WASTE MANAGEMENT

Hazardous materials are identified and regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); the Occupational Safety and Health

Administration (OSHA); and the Emergency Planning and Community Right-to-Know Act (EPCRA). Hazardous materials have been defined in AFI 32-7086, *Hazardous Materials Management*, to include any substance with special characteristics that could harm people, plants, or animals. Hazardous waste is defined in the Resource Conservation and Recovery Act (RCRA) as any solid, liquid, contained gaseous or semisolid waste, or any combination of wastes that could or do pose a substantial hazard to human health or the environment. Waste may be classified as hazardous because of its toxicity, reactivity, ignitability, or corrosivity. In addition, certain types of waste are “listed” or identified as hazardous in 40 CFR 263. The ROI for the elements of this resource consists of Langley AFB.

HAZARDOUS MATERIALS

The majority of hazardous materials used by Air Force and contractor personnel at Langley AFB are controlled through an Air Force pollution prevention process called HAZMART. This process provides centralized management of the procurement, handling, storage, and issuing of hazardous materials and turn-in, recovery, reuse, or recycling of hazardous materials. The HAZMART process includes review and approval by Air Force personnel to ensure users are aware of exposure and safety risks. Pollution prevention measures are likely to minimize chemical exposure to employees, reduce potential environmental impacts, and reduce costs for material purchasing and waste disposal.

HAZARDOUS WASTE

Langley AFB is a large-quantity hazardous waste generator. Hazardous wastes generated during operations and maintenance activities include solvents, metal-contaminated spent acids, and sludge from wash racks. Langley AFB recycles all lubricating fluids, batteries, oil filters, and shop rags. Hazardous wastes are managed in accordance with the *Langley AFB Hazardous Waste Management Plan*, dated 15 May 2004.

Langley AFB has a Spill Prevention and Facility Response Plan (certified in August 2004). The plan meets the Federal Spill Prevention Control and Countermeasures requirements, the Virginia Oil Discharge Contingency Plan requirements and the Coast Guard requirements.

ENVIRONMENTAL RESTORATION PROGRAM

The Department of Defense (DoD) developed the Environmental Restoration Program (ERP) to identify, investigate, and remediate potentially hazardous material disposal sites that existed on DoD property prior to 1984. Forty-eight ERP sites, including one at Bethel Manor Housing, have been identified since the ERP began at Langley AFB. Thirty-seven sites have been closed or require no further action. The remaining 11 sites are regulated under CERCLA. The *Langley AFB Management Action Plan* (Air Force 2004b) summarizes the current status of the base environmental programs and presents a comprehensive strategy for implementing actions necessary to protect human health and the environment. This strategy integrates activities under the ERP and the associated environmental compliance programs that support full restoration of the base.

ACC policy requires that any proposed project on or near a Langley AFB ERP site be coordinated through the Langley ERP Manager. Demolition and construction would take place at or near ERP sites LF-05, LF-07, LF-12, SS-19, OT-06, OT-38A, OT-38D, and OT-64.

ERP Site LF-05 is an abandoned landfill covering approximately 7 acres at the intersection of Nealy Avenue and Dogwood Avenue. The landfill was used during the 1930s and 1940s for general disposal, but no documentation exists regarding the types of refuse materials that were deposited. A field investigation of the landfill area, conducted in October 1999, indicated that the landfill area was different than previously reported and a new boundary for LF-05 was established in early 2000. The Final RI was submitted in October 2000. The Final FS Report was submitted in May 2001. A Draft Proposed Plan (PP) and Record of Decision (ROD) were also submitted at this time. This ERP site received remedial action (cap) that was completed on February 2003. The cap consisted of 18 inches of soil and 6 inches of topsoil.

ERP Site LF-07 is an abandoned landfill covering approximately 13 acres east of the north branch of Tide Mill Creek and southwest of the intersection of Sweeney Boulevard and Elm Street. The landfill was active from 1943 to 1968 as a general landfill, but documentation of the types of refuse materials that were deposited in the landfill does not exist. The majority of the landfill materials probably were municipal-type refuse. However, materials such as waste oil and solvents in drums, lead-based paints, thinners, batteries, tires, fabrics, construction debris, sanitary wastewater treatment plant sludge, and fly ash from coal burning may have been deposited at this site. A field investigation of the landfill area, conducted in October 1999, indicated that the landfill area was different than previously reported and a new boundary for LF-07 was established in early 2000. Approximately 2.9 acres of this site received remedial action (cap), which was completed in September 2002.

ERP Site LF-12 is an abandoned landfill covering approximately 13 acres southeast of Gregg Road in the northwest portion of the base. The landfill was in use from 1972 to 1981. The major portion of the site is now completely revegetated, while a portion of the older northeastern section of the site is currently used as a storage area for construction materials. One monitoring well was installed at the site. The Remedial Investigation (RI) was conducted in 1997; the RI report was completed in July 2000; the Final Feasibility Study (FS) was completed in June 2001; the Remedial Action (RA) was completed in April 2003; and the Draft Remedial Action Completion Report (RACR) was submitted in May 2003; the ROD was issued by the Air Force in 2002, but it has not been signed by the EPA or concurred upon by VDEQ.

ERP Site SS-19, Transformer Storage Area, approximately 3 acres in size, was an existing storage area for out-of service electrical transformers containing polychlorinated biphenyls (PCBs). Before PCB regulations were issued in 1979, transformers containing PCBs were stored outside in a gravel-covered fenced area at this site. A site investigation was completed at the site and a removal action was implemented in September 1998. A Decision Document was signed on December 2, 1998 and the site is considered closed.

ERP Site OT-06 is an abandoned entomology site and former wastewater treatment plant covering approximately 6.3 acres north of the mouth of Tide Mill Creek in the south portion of the base. Operations at this site began in 1943 and lasted into the 1960s. The entomology

building was demolished in the 1960s; and the wastewater treatment plan was abandoned in 1968. There are three monitoring wells located at this site. The Final RI Report and Final Proposed Plan were completed in March 2000; the ROD for no further action was signed on 26 September 2000. There is no further work schedule at this site, it is considered closed.

ERP Site OT-38A is one of four waste oil and trash burn areas base-wide. No documentation exists that indicates what was disposed at the sites. However, interviews indicated that waste oils and solvents were burned in four pits from early 1917 to 1960. This site was reported to have been located close to the Recreational Vehicle Storage Compound, just northwest of the main runway and was reportedly used from 1945 to 1950. The area is now flat and grass covered; there is no visible evidence of the former burn pits at this location. Contamination from waste oil, solvents, and residuals from trash burning is possible. There is no future work scheduled on this site, a ROD was signed in January 1999 and these ERP sites are considered closed.

ERP Site OT-64 (LF-05, LF-07, and LF-12) is an operable unit that addresses base-wide ground water contamination from 23 ERP sites and an additional six areas of concern. In general, the contaminants of concern in the groundwater are volatile organic carbons, semi-volatile organic carbons, pesticides, herbicides, and some metals (personal communication Patterson 2004) depending on the individual site of contamination. A groundwater monitoring program is underway for all associated sites. A data gap summary was finalized in July, 2001. An Engineering Evaluation has been draft for three of the 23 ERP sites and a Feasibility Study (FS) is in progress.

ASBESTOS WASTE/LEAD-BASED PAINT MANAGEMENT

An asbestos management plan provides guidance for the identification of asbestos-containing materials (ACMs) and the management of asbestos. The 1 FW *Asbestos Management and Operations Plan* provides guidance on the management of asbestos. An asbestos facility register is maintained by Civil Engineering. Persons inspecting, designing, or conducting asbestos response actions in public or commercial buildings must be properly trained and accredited through an applicable asbestos training program. The design of building alteration projects and requests for self-help projects are reviewed to determine if asbestos contaminated materials are present in the proposed work area and, if so, are disposed of in an off base permitted landfill.

The 1 FW *Lead-Based Paint Management and Operations Plan* contains policies and procedures associated with the management of lead-based paint. The plan is designed to establish operations and management organizational responsibilities and procedures so that personnel at Langley AFB are not exposed to excessive levels of lead-contaminated dust or soils. Plan components identify management actions for worker training, notification, and labeling, the Langley AFB Work Request program, record-keeping, personal protective equipment, construction inspection, the disposal of LBP-containing wastes, and lead toxicity investigations (Air Force 2003d).

STORAGE TANKS

There are three aboveground storage tanks (ASTs) and five underground storage tanks (USTs) located at, or near, two of the proposed construction/demolition sites. The ASTs and USTs are identified as follows:

- Four storage tanks are located within the Government Fuel Station area. Two of the tanks are 12,000-gallon ASTs containing diesel fuel and MoGas. The remaining two tanks are 6,000-gallon USTs which have been abandoned in place.
- Four storage tanks were located within the Alert Area (Building 1362). Three of these tanks were USTs. The first UST (1362.1) was a 1,000-gallon tank containing diesel. This tank was used to operate an emergency generator and was removed in 1992 because it was leaking. Remediation was taken to remove contaminated soil. The second UST (1362.2) was a 600-gallon tank which contained diesel and was installed to replace the 1,000-gallon tank identified above. This tank was also removed in January 2005. The third UST (1362.3) tank was a 1,000-gallon tank which contained heating oil. This tank was closed in place and removed in January 2005. The remaining storage tank is a 1,000-gallon diesel AST tank that has been removed and is awaiting reinstallation.

3.9 SAFETY

Ground, explosive and flight safety involving operations conducted by the 1 FW are addressed in this section. Because of the proposal to construct within portions of the airfield environment, the focus of this section is on safety-of-flight issues associated with airfield operations. Within the ground safety section, issues involving operations and maintenance activities that support operation of the airfield and the construction of the WINDO projects are addressed. Also considered in this section is the safety of personnel and facilities on the ground that may be placed at risk from flight operations. Within the flight safety section, aircraft flight risks and safety issues associated with the conduct of aviation activities at the installation are addressed.

Although ground and flight safety are addressed independently, it should be noted that, in the immediate vicinity of the runway, risks associated with safety-of-flight issues are interrelated with ground safety concerns. Any aircraft accident at the airfield would have direct impacts on the ground in the immediate vicinity of the mishap as a result of explosion, fire, and debris spread. The ROI for safety in this EA includes the airfield at Langley AFB and its immediate vicinity.

3.9.1 Existing Conditions

GROUND SAFETY

Day-to-day operations and maintenance activities conducted by the 1 FW and their tenants in the use and operation of the airfield are performed in accordance with applicable Air Force and ACC safety regulations, published Air Force Technical Orders, and standards prescribed by Air Force Occupational Safety and Health (AFOSH) requirements. Construction and maintenance activities associated with the base are conducted in accordance with OSHA and National Fire Protection Agency (NFPA) requirements.

The Air Force has conducted several safety studies over many years assessing aircraft accidents occurring in the vicinity of airfields. These studies reveal that approximately 27 percent of the accidents occurred on, or within an area 1,000 feet on either side of the runway; approximately 29 percent occurred within an area extending 3,000 feet from the end of the runway and 1,500

feet on either side of the extended runway centerline. Extending this 3,000-foot wide region another 5,000 feet accounted for an additional 8 percent of the accidents, and extending it another 7,000 feet accounted for an additional 5 percent (Air Force 1992).

Clear Zones and APZs are surface areas, described geographically on the ground. Specific dimensions, geophysical and topographic standards, and approved land uses are discussed in detail in *Unified Facilities Criteria (UFC) 3-260-01, Airfield and Heliport Planning and Design*; *Air Force Instruction (AFI) 32-7063*; and *Air Force Handbook (AFH) 32-7084*. The Clear Zone is basically a square that is 3,000 feet long and 3,000 feet wide at both ends of the runway (extends 3,000 feet out from the end of the runway and 1,500 feet on either side of the runway centerline). It is 206 acres in size at each end of the runway and includes the 46 acres of the Graded Area. UFC 3-260-01 dictates that within the Clear Zone (and outside of the Graded Area), there can be no permanent facilities. Brush and trees are allowed in this area; however, they may not penetrate the approach/departure slope, or the Transitional Surface slope.

The Graded Area is an area within the Clear Zone that is 1,000 feet in length and 2,000 feet wide (extends 1,000 feet from the end of the runway and 1,000 feet on either side of the runway centerline). The Graded Area is 46 acres at each end of the runway. UFC 3-260-01 dictates that the Graded Area must be clear of all aboveground obstacles (including roadbeds) and vegetation (except grass [herbaceous]). It must also have no abrupt surface irregularities, such as ditches or ponds. The maximum allowable slope of the Graded Area is +/- 2 percent.

UFC 3-260-01 is a manual incorporating all DoD airfield and heliport requirements and provides standardized airfield, heliport, and airspace criteria for the geometric layout, design and construction of runways, helipads, taxiways, aprons, and related permanent facilities to meet sustained [aviation] operations (UFC 2001). Construction for the Alert Area would also affect the area of frangibility and taxiway and apron clearance boundaries. The area of frangibility is defined as the surface that extends 250 feet on either side of the runway centerline to the installation boundary, or to the end of the Airfield Clear Zone. A clearance distance, which extends 200 feet from the taxiway centerline, is required.

EXPLOSIVES SAFETY

Defense Department Explosives Safety Board (DDESB) 6055.9-STD and AFM 91-201 Explosives Safety Standards represents DoD and the Air Force guidelines for complying with explosives safety. These regulation, as well as AFI 91-204 identifies explosive safety mishaps involved in both explosive and chemical agents. Explosives include ammunition, propellants (solid and liquid), pyrotechnics, explosives, warheads, explosive devices, and chemical agent substances and associated components presenting real or potential hazards to life, property, or the environment.

Siting requirements for munitions and ammunition storage and handling facilities are based on safety and security criteria. DDESB 6055.9 STD and AFM 91-201 Explosives Safety Standards require that defined distances be maintained between munitions storage areas and a variety of other types of facilities. These distances, called quantity-distance (Q-D) arcs, are determined by the type and quantity of explosive material to be stored. Each explosive material storage or

handling facility has Q-D arcs extending outward from its sides and corners for a prescribed distance. Within these Q-D arcs, development is either restricted or prohibited altogether in order to ensure safety of personnel and minimize potential for damage to other facilities in the event of an accident. In addition, explosive material storage and handling facilities must be located in areas where security of the munitions can be maintained at all times. Identifying the Q-D arcs ensures that construction does not occur within these areas.

Langley AFB controls, maintains, and stores all ordnance and munitions required for mission performance. Ordnance is handled and stored in accordance with Defense Department Explosives Safety Board (DDESB) 6055.9-STD and Air Force explosive safety directives (AFI 91-201). Additionally, all munitions maintenance is carried out by trained, qualified personnel using Air Force-approved technical data for the specific type of ordnance. Ample storage facilities exist, and all facilities are fully certified for the ordnance they store. No storage facility waivers are currently in effect.

The Air Force imposes procedures for arming and de-arming munitions and ordnance. All such activities occur on defined arm/de-arm pads. An arm/de-arm pad is located at the end of each runway and at the specified distance for safety away from incompatible land uses. Air Force and DDESB safety procedures require safeguards on weapons systems and ordnance that ensure against inadvertent releases.

Both live and inert munitions are stored and handled at Langley AFB. Inert training ordnance accounts for the vast majority of training materials. All munitions are handled and stored in accordance with DDESB and Air Force Explosive Safety Directives, and trained, qualified personnel using Air Force approved technical data carry out all munitions maintenance and aircraft loading. All storage facilities are approved for the specific ordnance involved.

FLIGHT SAFETY

As with ground safety, day-to-day flying operations are conducted by highly trained and qualified flight crews in accordance with detailed operational procedures. Since takeoff and landing operations constitute the most critical phases of flight, there are numerous requirements applicable to the airspace through which an aircraft flies during these operations. These requirements focus on the configuration of the airspace which extends from the end of the runway and is best described as a plane which rises on given gradients forming a floor, or an imaginary surface for the airspace used during these operations.

UFC 3-260-01 defines and describes these imaginary surfaces. The imaginary surfaces of concern in this assessment are referred to as the Approach/Departure Slope and the Transitional Surface Slope. The Approach/Departure Slope rises at a rate of 40:1, starting 200 feet from the end of the runway.

The Transitional Surface is an imaginary surface that extends outward and upward at right angles to the runway centerline and extended runway centerline at a slope ratio of 7:1 (for every 7 feet horizontally there can be a 1 foot increase vertically). The Transitional Surface connects the primary and the approach/departure clearance surfaces to the inner horizontal, the conical and the outer horizontal surfaces. UFC 3-260-01 dictates that the vertical height of vegetation

and other fixed or mobile obstacles (such as construction equipment) will not penetrate the Transitional Surface.

3.10 NOISE

Noise is defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise annoying. Human response to noise varies according to the type and characteristics of the noise source, distance between source and receptor, receptor sensitivity, and time of day. The ROI for noise includes the area surrounding each project location that may be affected by construction noise and noise from on-going operations.

Sound is measured with instruments that record instantaneous sound levels in decibels (dB). A-weighted sound level measurements (often denoted dBA) are used to characterize sound levels that are heard especially well by the human ear. All sound levels analyzed in this EA are A-weighted; thus, the term dB implies dBA unless otherwise noted.

At Langley AFB, noise contributions from aircraft operations and ground engine run-ups at the airfield have been calculated using the NOISEMAP model, the standard noise estimation methodology used for military airfields. NOISEMAP uses the following data to develop noise contours: aircraft types, runway utilization patterns, engine power settings, airspeeds, altitude profiles, flight track locations, number of operations per flight track, engine run-ups, and time of day. The Air Installation Compatible Use Zone (AICUZ) indicates that the alignment taken with proposed action would be primarily in the 75-80 and 80-85 Day-Night Average Sound Level (DNL) noise contours (Air Force 1997). The EOD Training Range will be certified for detonation of a maximum of five pounds of explosives for EOD proficiency training. This training will take place twice per week with up to 3 detonations per day. Due to the minimal amount of explosives used in proficiency training and the installation of protective barriers, noise levels will be below that which will cause damage to historic structure or cultural artifacts located at Langley. With the use of these training charges noise levels above that presently experienced with aircraft and other operations at Langley AFB should not occur.

4.0 ENVIRONMENTAL CONSEQUENCES

Chapter 4.0 presents the environmental consequences of the proposed action and alternatives at Langley AFB for each of the resource categories discussed in Chapter 3.0. To define the consequences, this chapter evaluates the project elements described in Chapter 2.0 against the affected environment provided in Chapter 3.0. Cumulative effects of the proposed action with other foreseeable future actions are presented in Chapter 5.0.

4.1 LAND USE, TRANSPORTATION, AND VISUAL RESOURCES

4.1.1 Proposed Actions

LAND USE

Implementation of all of the proposed actions would be consistent with the Base General Plan and no adverse environmental consequences are anticipated. Expansion of the Alert Area would also be consistent with the Alert Area ADP. Relocation of the Government Fuel Station, construction of the new Visitors' Quarters, and construction of the WRM and ACCRSS Parking Area would occur within areas that are identified for development with land uses that are appropriate for the development. Expansion of the Alert Area would primarily occur within the imaginary surfaces of the airfield and is appropriate for aircraft operations and maintenance land use.

Construction of the new EOD Range would require the establishment of a cleared area 500 feet around the explosives detonation point, away from all above ground facilities. This area includes public highways, base boundaries, runways, taxiways, parking aprons, and occupied buildings. This area would be restricted for future incompatible development due to the requirements for establishment of Explosive Quantity Safety Distance Arcs around the EOD Training Range. The current and proposed EOD Ranges are located on land designated as heavy industrial land use within the Headquarters ACC zoning initiative for Langley AFB. The proposed location is also one of two areas on Langley AFB designated for hunting. Both of these areas are being considered for development that would preclude future hunting. With the implementation of the proposed action use of this area for hunting would be limited when the EOD Range is active.

All proposed actions would be in accordance with the Enforceable Regulatory Programs of the Virginia Coastal Resources Management Program to the maximum extent practicable. Work associated with the Proposed Action would, as a matter of comity, be conducted as much as possible so as to be consistent with the Chesapeake Bay Preservation Act. None of the proposed actions would have any component that would affect any of the following sections of the Enforceable Regulatory Program: Fisheries Management, Subaqueous Lands Management, Dunes Management, and Shoreline Sanitation as noted in Appendix D.

Fisheries Management. The development associated with this project would have no significant effect on the conservation and enhancement of finfish and shellfish resources, or on the promotion of commercial and recreational fisheries.

Subaqueous Lands Management. The development of this project would not involve encroachment into, on, or over, state-owned subaqueous lands.

Dunes Management. There are no sand-covered beaches or sand dunes in the vicinity of this project.

Shoreline Sanitation. This project would include interconnections to the base sanitary sewer system. No septic systems, regulated by this program, would be proposed.

TRANSPORTATION

With the implementation of the proposed actions, on-base vehicular circulation would only experience minor changes. Construction-related truck traffic associated with the implementation of the proposed actions may lead to some degradation of base road surfaces and occasional congestion at the LaSalle and West Gates. These adverse environmental consequences would be short term and not significant.

Traffic on Worley Road would be unaffected by the relocation of the EOD Range. However, during periods when the EOD Range is active, access to Gregg Road will be restricted in the area of the range. An access road will be required from the closed access point to the detonation point within the range. This access road would be closed to traffic during EOD activities. The EOD Range area is fairly isolated and the section of Gregg Road in the area of the range experiences low usage, therefore the environmental consequences to traffic should be minor.

Traffic on Sweeney Boulevard would be unaffected by the construction of the WRM and ACCRSS Parking Area. However, access to this parking area would take place off Sweeney Boulevard. Turning movements into and out of the parking area have the potential to slow vehicles exiting and entering the base.

VISUAL RESOURCES

Relocation of the Government Fuel Station, expansion of the Alert Area, construction of the new Visitors' Quarters, relocation of the EOD Range, and construction of the WRM and ACCRSS parking area would occur in sections of the base that have experienced previous development. This construction, demolition and relocation would have no adverse environmental consequences to the existing visual and natural character of the base. Demolition of Buildings 74 and 75, and subsequent construction of the new Visitors' Quarters would improve the visual façade within the study area off of Nealy Avenue.

In cases where the construction disturbs the existing vegetation or other ground surface, the contractor would revegetate the areas as approved by the base or restore the surface as directed by the base. Any trees located in construction areas would be visibly marked and fenced at least to the dripline or the end of the root system to avoid any damage to trees. Stockpiling of soil would take place away from any trees to avoid damage to tree root systems. It would also be covered to avoid soil erosion and fugitive dust. All parking and stacking of heavy equipment would take place offsite as the weight and vibration causes soil compaction, which affects root growth, water and nutrient uptake, and gas exchange of vegetation and trees.

At locations within 50 feet of a water body, the contractor would install the appropriate soil erosion and sediment control devices to prevent sedimentation from entering nearby waters. Prior to the initiation of construction, all appropriate standard management practices would be established in accordance with the *Virginia Erosion and Sediment Control Handbook*.

4.1.2 Alternatives

Alternative locations proposed for the Government Fuel Station relocation have been identified in the Base General Plan for future outdoor recreational land use. All remaining alternatives for other WINDO projects differ primarily in location; therefore environmental consequences to Land Use, Transportation and Visual Resources would be the same magnitude as identified for the proposed actions.

4.1.3 No-Action Alternative

Under the No-Action Alternatives, construction, demolition and relocation would not take place. If relocation of the existing EOD Training Range does not take place, then additional future development near the Alert Area cannot take place due to the restrictions associated with the existing Explosive Safety Quantity Distance arcs. No significant environmental consequences to Land Use, Transportation, or Visual Resources would occur.

4.2 SOCIOECONOMICS

4.2.1 Proposed Actions

Socioeconomic analysis focuses on the potential effects of construction and demolition activities associated with the proposed action and their alternatives. Construction and demolition activity associated with the five projects associated with the proposed action would occur in FYs 2006-FY 2009. The total expenditures for these projects are expected to be approximately \$33.5 million. It is anticipated that local construction/demolition companies would be contracted to work on the projects contained in the WINDO plan. It is estimated that these projects would result in a short term increase of approximately 194 construction/demolition jobs and 141 secondary jobs, for a total positive short-term employment effect of 335. This number of jobs comprises less than 0.1 percent of the CY 2003 level of regional employment (VEC 2004) and would, therefore, have an insignificant impact. Personnel numbers will not increase or decrease as a result of the WINDO projects and the proposed actions would not result in an increase in long term base or regional employment levels. No long-term economic changes would occur as a result of implementing any of the preferred alternatives.

4.2.2 Alternatives

The proposed alternatives for the Government Fuel Station Relocation, Alert Area Expansion, and Construction of New Visitors' Quarters involve minor changes to the locations of these projects. Relocation of the EOD training range is limited to those areas of Langley AFB that meet requirements for explosive safety standards, including quantity distance arcs and is, therefore, limited to only the preferred alternative site approximately 1.5 miles from the existing site. Regardless of the alternative location chosen for the WINDO projects, implementation of

any of these alternatives would not have an adverse impact upon the local and regional socioeconomic environment.

4.2.3 No Action Alternative

Under the no action alternative, construction of the WINDO Projects would not occur, and the demolition of the buildings associated with the construction of the New Visitors' Quarters would not take place. There would be no changes to the local or regional economy.

4.3 INFRASTRUCTURE

4.3.1 Proposed Actions

Construction and demolition activities could result in some temporary interruption of utility services. These impacts would be temporary, occurring only for the duration of the construction and demolition period. In general, infrastructure on Langley AFB would improve under implementation of the Proposed Actions. New facilities and utility upgrades would enhance the existing base operations.

ELECTRICAL DISTRIBUTION

The proposed actions include demolition and relocation of existing utilities in order to provide adequate interconnections and service to WINDO projects. A minor increase in electrical use is expected to occur with expansion of the Alert Area, construction of the new Visitors' Quarters, and relocation of the EOD Training Range.

Electrical service will be constructed from the nearest available source (EOD Training Range Relocation) along Gregg Road to a utility pole located within the EOD Training Range area. This will provide for security lighting and electrical outlets for power tools and electrical equipment used by EOD personnel.

POTABLE WATER AND SEWAGE

Interconnections to the existing Langley AFB water and sewage systems are available to support the construction activities associated with the proposed actions. Upgrades would be necessary for Alert Area Facilities and for new connections to the Visitors' Quarters. Consumption of potable water and wastewater generation would increase with the operation of these facilities; however, these demands can be met through the existing and upgraded infrastructure. No adverse environmental consequences are anticipated from the construction and operation of these facilities.

SOLID WASTE MANAGEMENT

Demolition of buildings 74 and 75, as part of the Visitors' Quarters construction would generate solid wastes consisting of concrete, brick, wood, structural steel, glass, and miscellaneous metal building components. The total amount of demolition waste generated is estimated to be about 23,780 cubic yards. Demolition contractors would be directed to recycle materials to the maximum extent possible, thereby reducing the amount of demolition debris disposed in landfills. Materials not suitable for recycling would be taken to a landfill permitted to handle construction debris wastes, such as the Bethel Landfill in Hampton. That landfill has the

capacity to operate for 49 years (Commonwealth of Virginia Department of Environmental Quality 2004). Even if all 23,780 cubic yards of construction and demolition wastes were sent to Big Bethel Landfill, implementation of the proposed action would reduce the remaining useful life of this facility by less than 0.04 years. No significant environmental consequences on landfill capacity would be expected due to implementation of the Proposed Actions.

Small amounts of solid waste would be generated by EOD training activities (scrap lumber and dunnage). All solid waste generated at the EOD range will be inspected by EOD personnel to assure there is no material potentially presenting an explosive hazard (MPPEH) contained in the solid waste leaving the EOD Range.

Table 4.3-1. Cubic Yards of Solid Waste Expected from Demolition

<i>Fiscal Year</i>	<i>Cubic Yards of Solid Waste</i>
Building #74	11,164
Building #75	11,164
Visitors' Quarters Parking Lots	1,262
Visitors' Quarters Sidewalks	110
Total	23,700

4.3.2 Alternatives

Alternatives to the proposed actions are for the most part minor changes in project location; therefore, environmental consequences to electrical distribution, potable water, sewage, and solid waste management would not differ from the environmental consequences associated with the proposed actions.

4.3.3 No-Action Alternatives

Under the No-Action Alternatives, relocation, construction and demolition would not occur. Utility consumption would not change and there would be no environmental consequences to this resource.

4.4 CULTURAL RESOURCES

A number of Federal regulations and guidelines have been established for the management of cultural resources. Section 106 of the *National Historic Preservation Act* (NHPA), as amended, requires Federal agencies to take into account the effects of their undertakings on historic properties. Historic properties are cultural resources that are listed in, or eligible for listing in, the National Register of Historic Places (NRHP). Eligibility evaluation is the process by which resources are assessed relative to NRHP significance criteria for scientific or historic research, for the general public, and for traditional cultural groups. Under Federal law, impacts to cultural resources may be considered adverse if the resources have been determined eligible for listing in the NRHP or have been identified as important to American Indians as outlined in the *American Indian Religious Freedom Act* (AIRFA) and EO 13007 Indian Sacred Sites.

Analysis of potential impacts to cultural resources considers direct impacts that may occur by physically altering, damaging, or destroying all or part of a resource; altering characteristics of the surrounding environment that contribute to the resource's significance; introducing visual or audible elements that are out of character with the property or alter its setting; or neglecting the resource to the extent that it deteriorates or is destroyed. Direct impacts can be assessed by identifying the types and locations of proposed activity and determining the exact location of cultural resources that could be affected. Indirect impacts generally result from increased use of an area.

4.4.1 Proposed Actions

The proposed action consists of five projects: relocation of the Government Fuel Station; expansion of the Alert Area; construction of new Visitors' Quarters; relocation of EOD training range; and construction of the WRM and ACCRSS parking area. For all projects, compliance with Section 106 of the NHPA, including SHPO consultation, would take place prior to the project beginning, including determining NRHP eligibility of several buildings that are currently unevaluated. All projects include ground-disturbing activities where there is a possibility of encountering previously unrecorded and unknown archaeological resources. In the event of inadvertent discoveries of cultural resources during any project-related activities, all activities at that location would be halted until the find is evaluated by a qualified professional archaeologist in compliance with the Langley CRMP (Air Force 2004a) and Federal regulations.

The Government Fuel Station Relocation project is not expected to impact cultural resources. Under the proposed action, a new Government Fuel Station would be constructed adjacent to Facility 322 and south of Beech Avenue. The project would also involve utilities connections, paving, landscaping, and the construction of a berm. Although there has been minimal survey in the area of relocation, it is heavily disturbed and is considered to have a low sensitivity for archaeological resources.

The Alert Area Expansion consists of improvements within approximately 130 acres, including expanding the alert area ramp, taxiway repair, additional perimeter security, and the replacement of the Alert Hangar (Building 1362) roof and doors. There are no known archaeological resources near the project area, it is in an area of low sensitivity for archaeological resources, and it is outside the NRHP-eligible Historic District.

Impacts to historic properties would occur as a result of renovations to the Alert Hangar. A recent report (Air Force 2004b) evaluated the Alert Hangar as eligible for the NRHP because of its association with the Cold War Era. The Proposed Action includes changes to original, character-defining features of the Alert Hangar, including the original barn doors, interior barn door features, and construction of additional pavement to accommodate parking for two additional aircraft (the roof is not original). Langley AFB and the Virginia SHPO have executed a Memorandum of Agreement (MOA) with stipulations regarding renovations to the Alert Hangar. These mitigation actions include finalizing the draft report, *Historic Evaluation Buildings 351 and 1362, Draft* (Air Force 2004b); completion of additional recording forms for the SHPO; submittal of a complete set of full-size drawings and forms to the SHPO, the Office of

the Command Historian, HQ ACC and the U.S. Air Force Historical Research Agency at Maxwell AFB, Alabama. In addition, Langley AFB will include the Alert Hangar in the revised Langley AFB Cultural Resources Training video, and will highlight the Hangar in its annual Historic Preservation Week activities. By ensuring that the stipulations are implemented, Langley AFB will comply with Sections 110 and 106 of NHPA, as well as with NEPA. A copy of the executed MOA is in Appendix C.

Impacts to cultural resources are unlikely as a result of the Visitors' Quarters construction project. Much of the area has been surveyed for archaeological resources, and it is considered to have a low sensitivity for their presence. The proposed Visitors' Quarters would be constructed on the northeast corner of Nealy Avenue and Tuskegee Airmen Boulevard. Construction would require the demolition of Buildings 74 and 75. Given that neither building is considered eligible for the NRHP, demolition will have no effect on historic resources. Langley AFB would comply with NHPA Section 106 prior to project implementation to ensure possible impacts to NRHP eligible cultural resources are considered.

Impacts to cultural resources are not expected as a result of the project to relocate the EOD Training Range to the North Base Industrial Area, south of the Munitions Storage Area on the east side of Gregg Road. The project would involve clearing a 500 foot circular clearance zone, leveling, gravel fill, an access road, and a barricade around the detonation point. With the exception of a small portion of wetland, the majority of this project area has been surveyed and no archaeological or architectural resources have been identified. This project is outside the NRHP-eligible Historic District.

Impacts to cultural resources could occur as a result of the project to construct the WRM and ACCRSS parking area. This project proposes to construct a parking area to support the WRM and ACCRSS, and a pedestrian bridge over the creek. Although no archaeological or architectural resources have been identified in the surrounding area and the project is outside the NRHP-eligible Historic District, there has been no survey in the project area. Compliance with Section 106 of the NHPA, including SHPO consultation, would take place prior to the project beginning.

4.4.2 Alternatives

Impacts to cultural resources could occur under Government Fuel Station Alternative One because the area has not been surveyed for archaeological resources, and portions of the area are relatively undisturbed. The alternative is outside the NRHP-eligible Historic District; compliance with Section 106 of the NHPA, including SHPO consultation, would take place prior to the project beginning.

There are two alternatives for expansion of the Alert Area. Impacts to a historic property could occur under Alternative One. Because the Alert Hangar is considered eligible for the NRHP, replacing the roof and doors of the hangar would result in adverse effects. The MOA executed by Langley AFB and the Virginia SHPO (refer to Appendix C) stipulates a number of actions by which Langley AFB will comply with Section 106 of NHPA.

There is one alternative for construction of the new Visitors' Quarters. Impacts to cultural resources are not expected to occur under this alternative. There are no known archaeological sites in the vicinity and most of the area has been surveyed. The alternative differs only in the location of the new construction. None of the alternative locations are near identified archaeological resources.

There are no alternatives to relocation of the EOD Training Range. Alternative relocation sites were evaluated but rejected due to safety issues related to explosives. The EOD Training Range will be certified for detonation of a maximum of five pounds net explosive weight (NEW) of explosives for EOD proficiency training. This training will take place twice per week with up to 3 detonations per day. The impulsive sound pressure from the firing of large weapons systems and the detonation of large explosive charges can cause structures to vibrate. However, modeling conducted by the Army Environmental Center based upon data developed by the U.S. Bureau of Mines, sound levels reaching a home or other structure must be greater than 137decibels to cause any damage (USACHPPM 2001). for reference, the predicted level for 120mm tank gun firing 500 meters from the firing point is 143 decibels. Levels from this small amount of explosives will be well below that level. Therefore, due to the minimal amount of explosives used in proficiency training, noise levels will below that which will cause damage to historic structure or cultural artifacts located at Langley.

There are no alternatives to constructing the WRM and ACCRSS parking area. Since the proposed action is to provide parking for WRM and ACCRSS personnel, no other location for the parking area is suitable to provide acceptable parking.

4.4.3 No-Action Alternatives

Under the No-Action Alternative, WINDO construction projects would not take place as proposed. Impacts to cultural resources are not expected under this alternative and resources would continue to be managed in compliance with Federal Law and Air Force regulations.

4.5 BIOLOGICAL RESOURCES

4.5.1 Proposed Actions

TERRESTRIAL COMMUNITIES

Under the proposed actions, demolition and construction would disturb areas that were previously developed, have currently experienced high levels of continual human activity, lack native terrestrial habitat, and exhibit a low level of biodiversity. The only plant or animal species likely to be displaced from this marginal habitat are individuals of common and locally abundant species. The overall ecological effect would therefore be insignificant.

WETLAND AND FRESHWATER AQUATIC COMMUNITIES

This EA evaluates any potential impacts to wetland resources as a result of the proposed construction, demolition, and renovation activities associated with the projects listed below. Applicable construction practices and regulatory requirements for possible wetland impacts are addressed in Sections 2.1 and 2.5.3.

GOVERNMENT FUEL STATION RELOCATION

The Proposed Action would relocate the existing government fuel station to a location adjacent to Building 332, south of Beech Avenue (Figure 2-1). This area does not support any areas identified as wetlands (Air Force, 2001, USACE, 2004). Thus, no impacts to wetlands are expected from this action.

ALERT AREA EXPANSION

The Alert Area Expansion encompasses 130 acres, of which, 8.3 acres are classified as herbaceous wetlands (southwest of Taxiway I). The project involves an expansion of the existing alert ramp (northeast of Taxiway I), various taxiway repairs, the addition of a perimeter security fence, and upgrades to the alert hangar buildings. This project also involves the construction of a 10,000 square-foot (0.23 acre) parking area, a new hangar, a new dormitory, and a new guard gate. These proposed actions are outside of areas identified as wetlands (Air Force, 2001, USACE, 2004). As a result, no impacts to wetlands are expected from this action.

VISITORS' QUARTERS CONSTRUCTION

This project includes the demolition of existing Buildings 74 and 75 and associated infrastructure. The project also includes the construction of a 36,000 square-foot (0.83 acre) building, a 22,600 square-foot (0.52 acre) parking area, and associated infrastructure. The project's footprint is outside of any waters or wetlands regulated by State and/or Federal law and regulation. Standard construction practices (addressed in Section 2.1) would be implemented to eliminate any secondary impacts to adjacent wetland areas. Thus, no impacts to wetland resources are expected as a result of this project.

EOD TRAINING RANGE RELOCATION

The EOD Training Range relocation project involves the establishment of circular 500-foot clearance zone, from the center of the detonation point, in accordance with Technical Order (TO) 11A-1-42. This TO also requires the removal of all vegetation within a 200-foot perimeter of the detonation point to reduce the risk of fire. This area would be leveled and filled with gravel. Approximately 5.6 acres of herbaceous wetlands occur within the 500-foot clearance zone, however, there are no wetlands located inside of the proposed area to be filled. No impacts to wetlands would result from the establishment of this training range.

An access road would be constructed to connect the proposed detonation area to Gregg Road. Wetland areas would be avoided in the construction of this single-lane road. Thus, no impacts to wetlands would result from the establishment of this training range.

CONSTRUCTION OF WRM GROUP AND ACCRSS PARKING AREA

This project would include a new 41,000 square-foot (0.94 acre) parking area with access off of Sweeney Boulevard (See Figure 2-6). In addition, a 120-foot pedestrian bridge would be constructed to span the existing watercourse and provide access to Building 330. Construction of the parking area would be outside of any waters or wetlands regulated by State and/or Federal law and regulation. Standard construction practices (addressed in Section 2.1) and regulatory requirements (addressed in Section 2.5.3) would be implemented prior to the start of

any work in adjacent wetland areas. Any impacts to wetlands would be minor and addressed by way of permit authorization.

THREATENED, ENDANGERED, AND SPECIAL STATUS SPECIES

Species listed, proposed for listing, or candidates for listing as threatened and endangered in accordance with the ESA of 1973 (87 Stat. 884, as amended; 16 USC 1531 *et seq.*) are not anticipated to be adversely affected by the proposed actions. State-protected species would also not be adversely affected by the proposed actions because their habitat would not be altered and because changes in base activities are not expected to be biologically significant. No special species or sensitive habitats are expected to be impacted.

4.5.2 Alternatives

The EOD Training Range Relocation Project and the proposed Construction of The WRM and ACCRSS parking area have no alternatives. No additional regulatory requirements for wetland resources exist under the alternatives presented below.

GOVERNMENT FUEL STATION RELOCATION

Under Alternative One, the existing government gas and diesel refueling station would be relocated to a location within the 1300 Area (Figure 2-2). Approximately 0.19 acres of herbaceous wetlands occur in the southeast portion of the Area, near OT-38a (See Figure 2-2). Given the available space at 1300 Area, avoidance of wetlands is possible with careful site planning. Every effort will be made to avoid wetland resources. Standard construction practices (addressed in Section 2.1) would be implemented to eliminate any secondary impacts to adjacent wetland areas. As a result, no impacts to wetlands are expected from this action.

ALERT AREA EXPANSION

Under Alternative One, Taxiway J (Juliet Taxiway) would be closed, relocated, and/or declassified in order to address the 500-foot Accident Potential Zone (APZ) clear zone requirements from the centerline of runway 08/26. Every effort will be made to avoid adjacent wetland resources throughout the construction process. Standard construction practices (addressed in Section 2.1) would be implemented to eliminate any secondary impacts to nearby wetlands. As a result, no impacts to wetlands are expected from this action.

Under Alternative Two, the 119th Fighter Squadron would operate the West Ramp instead of constructing additional ramp space. This action would not require any new construction, thus, no new impacts to wetland resources.

VISITORS' QUARTERS CONSTRUCTION

Alternative One would construct the new Visitors' Quarters east of the B-52 static display off of Nealy Avenue, near the main gate. No wetland areas occur near this site (Air Force, 2001, USACE, 2004). As a result, no impacts to wetlands are expected from this action.

4.5.3 No-Action Alternatives

Under the No-Action Alternative, no WINDO projects would be constructed, no facilities would be upgraded, and force protection setbacks would continue to be violated. As a result, no impacts to wetland resources are expected under this alternative. No regulatory requirements would apply to this alternative.

4.6 WATER RESOURCES

4.6.1 Proposed Actions

SURFACE WATER/GROUNDWATER

Development of the proposed actions within the WINDO project would include new impermeable surfaces that would generate additional stormwater runoff. Given the flat, low elevation of the surrounding area, stormwater would be directed to a series of drainage swales following the existing Langley AFB drainage system. However, the construction of the Visitors' Quarters would include a new detention facility to manage storm water runoff.

There would be no significant impacts to water resources from point source or non-point sources with implementation of the proposed actions. The proposed actions would not conflict with point source or non-point source pollution control objectives associated with the Virginia Coastal Zone Management Program. Prior to the start of construction, silt fences, storm drain inlet and outlet protection, and other appropriate standard construction practices would be instituted in accordance with DCR's *Virginia Erosion and Sediment Control Handbook*. Because more than 2,500 square feet would be disturbed by construction, a General Permit for Discharges of Stormwater from Construction Activities would be required for each project.

FLOODPLAINS

Development associated with the proposed actions would be within the 100-Year floodplain. With much of Langley AFB within the 100-year floodplain there is no practicable alternative to not implementing the proposed action within a floodplain.

4.6.2 Alternatives

Alternatives to the proposed actions are primarily locational, therefore, impacts to water resources would mirror the impacts associated with the proposed actions.

4.6.3 No-Action Alternative

Under the No-Action Alternatives construction, demolition, and relocation associated with the WINDO Projects would not occur. There would be no environmental consequences to this resource, but existing facilities would be subject to occasional flooding.

4.7 AIR QUALITY

The CAA Section 176(c), General Conformity, establishes certain statutory requirements for federal agencies with proposed federal activities to demonstrate conformity of the proposed activities with each state's State Implementation Plan (SIP) for attainment of national ambient

air quality standards (NAAQS). In 1993, USEPA issued the final rules for determining air quality conformity. Federal activities must not (1) cause or contribute to any new violation; (2) increase the frequency or severity of any existing violation; or (3) delay timely attainment of any standard, interim emission reductions, or milestones in conformity to a SIP's purpose of eliminating or reducing the severity and number of NAAQS violations or achieving attainment of NAAQS. General conformity applies only to non-attainment and maintenance areas. If the emissions from a federal action proposed in a non-attainment area exceed annual emission thresholds identified in the rule (*de minimis* levels) or are regionally significant (identified as equal to, or more than, 10 percent of the emissions inventory for the region), a conformity determination is required of that action. The thresholds become more restrictive as the severity of the non-attainment status of the region increases. For the newly adopted 8-hour O₃ and the PM_{2.5} standards, according to USEPA Guidance (March 2000), conformity and other planning requirements would be triggered on the effective date of the final USEPA designations.

The air quality analysis included an assessment of direct and indirect emissions from the known activities associated with the proposed actions and the No-Action Alternative at Langley AFB that would affect the regional air quality. The activities identified as requiring evaluation included the development of facilities for the WINDO. Emissions from the proposed actions and alternatives are either "presumed to conform" (based on emissions levels that are considered insignificant in the context of overall regional emissions) or they must demonstrate conformity with approved SIP provisions.

Emissions from WINDO projects during the construction period were quantified separately to determine the potential impacts on regional air quality. The emissions from each project were compared to federal conformity *de minimis* thresholds for O₃ precursors (volatile organic compounds [VOC] and NO_x).

In the following sections, emissions of VOC, NO_x, CO, SO_x, and PM₁₀ from construction, demolition, grading, and paving activities were calculated using emission factors from the *Air Emissions Inventory Guidance Document for Mobile Sources at Air Force Installations* (Air Force 2005) and the *California Environmental Quality Act Air Quality Handbook* (South Coast Air Quality Management District 1993), both of which are compilations of USEPA emission factors. The emission factors included contributions from engine exhaust emissions (i.e., on-site construction equipment, material hauling, and workers' travel), and fugitive dust emissions (e.g., from grading and trenching activities).

4.7.1 Proposed Actions

The emissions, in tons, from the individual WINDO projects are presented in Table 4.7-1.

Table 4.7-1. Project Emissions – Proposed Actions (Tons per Year)

<i>Criteria Pollutants</i>	<i>Langley AFB Baseline Emissions</i>	<i>Hampton Roads AQCR</i>	<i>Fuel Station Relocation</i>	<i>Alert Area Expansion</i>	<i>Visitors' Quarters Project</i>	<i>EOD Training Range Relocation</i>	<i>WRM/ ACCRSS Parking</i>
CO	768.09	257,325	0.1	2.7	7.8	2.6	4.1
VOCs	115.18	79,750	< 0.1	0.5	2.4	0.5	1.1
NO _x	283.38	83,560	0.1	4.7	35.1	5.3	15.1
SO ₂	6.47	110,220	< 0.1	0.4	< 0.1	0.4	0.2
PM ₁₀	10.29	49,860	< 0.1	3.9	2.6	0.4	1.1

GOVERNMENT FUEL STATION RELOCATION

Emission calculations were based on the addition of 30,000 square feet of new pavement with a pavement depth of six inches. Direct operational emissions at Langley AFB after the proposed fuel station relocation is completed are expected, for the most part, to be virtually identical to or less than current operations. It is likely that the new equipment would be more efficient and have lower emissions than the equipment currently present at the Base. Nevertheless, the installation or modification of any air emission sources, such as fuel storage and dispensing equipment, would trigger an update of the Synthetic Minor Operating permit issued by VDEQ to reflect the changes.

ALERT AREA EXPANSION

Emission calculations for the proposed action were based on the assumption that the project would require 130 acres of grading and site preparation, and the paving of a 5-acre ramp/taxiway and a 1-mile long, 100-foot wide access road with six inches of pavement.

No direct or indirect operational emissions are expected to occur at Langley AFB after the proposed alert area expansion is completed.

VISITORS' QUARTERS

Emission calculations were based on the demolition of Buildings 74 and 75 (22,328 square feet, combined) and the construction of a new 36,000 square foot, 4-story building and associated parking lot (113 new parking spaces). Direct operational emissions at Langley AFB after the proposed visitors' quarters project is completed are expected, for the most part, to be virtually identical to or less than current operations, as sources that are removed due to demolition of current facilities would be replaced by similar air emission sources at the new facilities. It is likely that the new equipment would be more efficient and have lower emissions than the equipment currently present in the buildings. Nevertheless, the installation or modification of any air emission sources, such as boiler and heaters, emergency generators, etc., would trigger an update of the Synthetic Minor Operating permit issued by VDEQ to reflect the changes. There are no expected increases in operational emissions as a result of this proposed construction project.

EOD TRAINING RANGE

No direct or indirect operational emissions are expected to occur at Langley AFB after the proposed EOD training range relocation project is completed.

WRM AND ACCRSS PARKING AREA

The emissions were calculated based on construction of a 180-space parking lot, with 6-inch pavement depth. No direct or indirect operational emissions are expected to occur at Langley AFB after the proposed WRM/ ACCRSS parking project is completed.

Total construction and demolition emissions generated on base and within the Hampton Roads AQCR are less than 1 percent when compared to regional emissions and are below the 100 tons per year *de minimis* federal conformity thresholds for NO_x and VOCs. Emissions generated by construction and demolition projects are temporary in nature and would end when construction and demolition are complete. The emissions from fugitive dust (PM₁₀) would be significantly less due to the implementation of control measures in accordance with standard construction and demolition practices. For instance, frequent spraying of water on exposed soil during construction and demolition, proper soil stockpiling methods, and prompt replacement of ground cover or pavement are standard landscaping procedures that could be used to minimize the amount of dust generated during development. The base employs street sweepers to reduce the amount of dirt and debris on the roadways within the base. Using efficient grading practices and avoiding long periods where engines are running at idle could reduce combustion emissions from construction and demolition equipment. Vehicular combustion emissions from construction workers commuting may be reduced by carpooling.

The above noted WINDO projects would not conflict with the air pollution control objectives associated with the Virginia Coastal Management Program.

General conformity regulations set forth in 40 CFR 51 Subpart W, and adopted in the Virginia Administrative Code (9 VAC 5 Chapter 160); outline *de minimis* levels of emissions, below which it is presumed that the action conforms to the SIP. The *de minimis* levels for O₃ precursors in a maintenance area outside of an O₃ transport region (i.e., Hampton Roads AQCR) are 100 tons per year of VOC emissions and 100 tons per year of NO_x. In addition, the proposed action's emissions (both direct and indirect) must be compared to the regional inventory to determine if the emissions are "regionally significant." Emission increases of O₃ precursors (NO_x and VOCs) are well below the threshold thus demonstrating compliance with CAA conformity requirements. In addition, the emissions from the proposed fuel station relocation project, as shown in Table 4.7-1, are well below the regional significance threshold defined by 10 percent of the regional emissions (i.e., 836 tons per year of NO_x and 797 tons per year of VOC).

4.7.2 Alternatives

Alternatives to the proposed actions are primarily locational, therefore, air quality emissions would be similar to the environmental consequences associated with the proposed actions. Alternative Two for the alert area expansion project would eliminate the need to construct a

new ramp/taxiway. Emissions under Alternative Two would be roughly 30 percent less than those under Alternative One, due to the reduced area of pavement construction.

4.7.3 No-Action Alternatives

Under the No-Action Alternative, construction, demolition, and renovation associated with the WINDO projects would not occur. Air quality would remain the same as present conditions.

4.8 HAZARDOUS MATERIALS AND WASTE MANAGEMENT

4.8.1 Proposed Actions

HAZARDOUS MATERIALS

All hazardous materials and construction/demolition debris generated by the relocation of the government fuel station, expansion of the Alert Area, construction of new Visitors' Quarters, relocation of the EOD Training Range, and construction of a parking area for the WRM Group and ACCRSS would be handled, stored and disposed of in accordance with federal state and local regulations and laws. Permits for handling and disposal of hazardous materials are the responsibility of the contractor. Hazardous materials shall not be stored on base. All hazardous materials used at the construction site including, but not limited to, paint, paint thinners, gasoline, diesel, oil and lubricants shall be removed daily. Only quantities of hazardous materials required to carry out the work for the day would be permitted on site.

Construction, demolition, and renovation associated with the proposed actions may require the use of hazardous materials by construction personnel. In accordance with the base's HAZMART procedure, copies of Material Safety Data Sheets must be provided to the base and maintained on the construction site. Construction personnel would comply with federal, state, and local environmental laws and would employ affirmative procurement practices when economically and technically feasible.

No adverse environmental consequences related to hazardous materials are expected from the construction, demolition, and renovation associated with the proposed actions.

HAZARDOUS WASTE

Hazardous waste, such as paints, adhesives, and batteries, may be generated by construction personnel during the construction, demolition, and renovation associated with the proposed actions. Storage and disposal of these wastes would be coordinated by the site construction contractors with the base hazardous waste program manager. The amounts and types of hazardous wastes generated by base personnel during the operation and maintenance of each of the proposed facilities are not anticipated to change. No adverse environmental impacts related to hazardous wastes are expected from the continued use of these materials.

In the event of fuel spillage during demolition or construction, the contractor would be responsible for its containment, clean up, and related disposal costs. The contractor would have sufficient spill supplies readily available on the pumping vehicle and/or at the site to contain any spillage. In the event of a contractor related release, the contractor would immediately

notify the 1 FW Civil Engineering/Environmental Management Office and take appropriate actions to correct its cause and prevent future occurrences.

ASBESTOS/LEAD-CONTAINING WASTE

Prior to any demolition activities associated with the proposed actions, the affected facilities would be inspected to identify all asbestos, including Category I and Category II non-friable ACM and lead-containing materials. If asbestos-containing materials (ACM) or lead-based paint are found in or near the demolition areas, then the following Federal and State regulations must be followed. Due to the age of the buildings, lead-based paint removal may be a factor in demolition of these facilities (Visitors' Quarters construction proposed actions).

- *Asbestos Removal and Disposal.* Upon classification as friable or non-friable, all waste ACM should be disposed of in accordance with the Virginia Solid Waste Management Regulations (9 VAC 20-80-640), and transported in accordance with the Virginia regulations governing Transportation of Hazardous Materials (9 VAC 20-110-10 *et seq.*). Buildings 74 and 75 both contain asbestos, mainly in the form of floor tiles. Building 75 has asbestos thermal system insulation (TSI) in the first floor mechanical room that can only be accessed from the outside. Abatement of the TSI would be included within the demolition of the building.
- *Lead-Based Paint Removal and Disposal.* The proposed project should comply with the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) regulations, and with the Virginia Lead-Based Paint Activities Rules and Regulations (9 VAC 20-60-261).

Lead-containing materials would also be disposed of in accordance with applicable regulations. The proposed projects should comply with OSHA regulations and with the Virginia Lead-Based Paint Activities Rules and Regulations (9 VAC 20-60-261).

ENVIRONMENTAL RESTORATION PROGRAM

Construction and demolition associated with the proposed actions would occur at or near ERP Sites. ERP Site OT-38A is located at or near the Alert Area project areas and the alternative location for the Government Fuels station. SS-19 is also located near the Government Fuels station alternative location. ERP sites LF-05 and OT-06 are located at or near the Visitors' Quarters project area. ERP Site LF-12 is located at or near the EOD Range Relocation project areas. ERP Site LF-07 is located at or near the WRM and ACCRSS parking project area. ERP Site OT-64 is associated with a majority of the project areas.

Prior to the start of construction a contractor prepared Health and Safety Plan would be submitted and approved identifying the potential hazards associated with contamination at these ERP sites. Any soil suspected of contamination, discovered during the construction or demolition processes, would be tested and disposed of in accordance with VDEQ regulations. Disposal of contaminated soil would be funded by these construction and demolition projects. The environmental consequences to this resource are not anticipated to be significant.

STORAGE TANKS

Underground storage tanks associated with Building 1362 (Alert Area) were previously closed in place and then removed. The aboveground storage tank within the footprint of the Alert Area proposed action was removed and is awaiting reinstallation.

There are two 12,000-gallon above-ground storage tanks and two 6,000 gallon underground storage tanks associated with the current location of the Government Fuel Station. The two underground storage tanks have been abandoned in place and will not be disturbed. The environmental consequences to these resources are not anticipated to be significant.

4.8.2 Alternatives

Alternatives to the proposed actions are primarily locational, therefore, impacts to hazardous materials, hazardous waste, asbestos/lead-containing waste, and storage tanks would mirror the impacts associated with the proposed actions.

4.8.3 No-Action Alternatives

Under the No-Action Alternatives construction, demolition, and relocation associated with the WINDO projects would occur. There would be no environmental consequences to Hazardous Materials and Waste Management activities.

4.9 SAFETY

4.9.1 Proposed Actions

GROUND SAFETY

There would be no significant environmental consequences to ground safety as a result of construction and demolition activities. There would be a temporary increase in ground safety risk due to construction activities. All activities and workers at the construction site would comply with OSHA standards and would be required to conduct construction activities in a manner that would not pose any risks to personnel at or near the construction site.

EXPLOSIVE SAFETY

The proposed construction for the Government Fuel Station Relocation, Alert Area Expansion, Visitors' Quarters Construction, and Construction of the MRM and ACCRSS Parking Area is compatible with existing land uses and is located outside of munitions Q-D arcs. In addition, as no explosives would be used or handled during construction activities, no additional risk is expected from the proposed actions.

The EOD Training Range demolition bunker has been sited to allow for maximum overlap of the Q-D arcs for the existing Munitions Storage Area while keeping new facilities, including the access road and training aid storage building, which are associated with the range, outside of the Munitions Storage Area Q-D arc. Personnel at Langley AFB control, maintain, and store all explosives required for mission performance. Explosives are handled and stored in accordance with Air Force explosive safety directives (Air Force Manual [AFM] 91-201) and no adverse environmental consequences are anticipated with the relocation of the EOD Training Range.

FLIGHT SAFETY

A comparison of the No-Action Alternative was compared with the APZs at Langley AFB. Tables 4.9-1 compares the WINDO projects with the APZ information from Chapter 3.0.

Table 4.9-1. APZ Compatibility with Proposed Actions at Langley AFB

<i>Project Title</i>	<i>Action</i>	<i>Compatibility</i>
WRM/ ACCRSS Parking Lot	Construction of Parking Lot and pedestrian bridge	Compatible
EOD Training Range Relocation	Relocation/Construction of new EOD Training Range	Compatible
Construct New Visitors' Quarters	Construction of new Visitors' Quarters and associated parking lot	Compatible
Relocation of Government Fuel Station	Relocation and construction of new Government Fueling Station	Compatible
Alert Area Expansion	Construction of a new alert apron, and repair of the hangar and ramp	Compatible

4.9.2 Alternatives

Alternatives to the proposed actions are primarily locational, therefore, environmental consequences to alternatives would mirror the environmental consequences associated with the proposed actions.

4.9.3 No-Action Alternatives

Under the No-Action Alternatives, construction and demolition of the projects included within the WINDO EA would not occur. Management of explosives and munitions would continue under existing Langley AFB programs and there would be no environmental consequences to this resource.

4.10 NOISE

Noise impact analyses typically evaluate potential changes to existing noise environments that would result from implementation of a proposal. Potential changes in the noise environment can be (1) beneficial (i.e., if they reduce the number of sensitive receptors exposed to unacceptable noise levels); (2) negligible (i.e., if the total area exposed to unacceptable noise levels is essentially unchanged); or (3) adverse (i.e., if they result in increased exposure to unacceptable levels).

4.10.1 Proposed Actions

Implementation of the proposed actions would have minor, temporary increases in localized noise levels (90-95 dBA) in the vicinity of the project area during development. The base is an active military facility that typically experiences high noise levels from daily flight operations. Use of construction and demolition equipment for site preparation and development (i.e., demolition, grading, fill, and construction) would generate noise. However, noise would be similar to typical construction and demolition noise, last only the duration of the specific

construction and demolition activities, and could be reduced by the use of equipment sound mufflers and restricting construction and demolition activity to normal working hours (i.e., between 7:00 a.m. and 5:00 p.m.). Table 4.10-1 shows sound levels associated with typical heavy construction equipment under varying modes of operation.

Table 4.10-1. Typical Equipment Sound Levels

EQUIPMENT	SOUND LEVEL (IN DBA) UNDER INDICATED OPERATIONAL MODE ¹		
	IDLE POWER	FULL POWER	MOVING UNDER LOAD
Forklift	63	69	91
Backhoe	62	71	77
Dozer	63	74	81
Front-End Loader	60	62	68
Dump Truck	70	71	74
<i>Note:</i> 1. Measured at 125 Feet. <i>Source:</i> Air Force 1998c			

Compared with aircraft noise, noise produced by construction and demolition would be relatively lower in magnitude, and spread out during the business day. Noise from truck traffic hauling construction materials to construction location and demolition materials away from the demolition location and the staging area would not affect base residents because the West Gate would provide development access. The noise disruptions would be temporary and would be limited to daytime hours; therefore, impacts are considered insignificant. The proposed WINDO projects would be located in noise compatible areas for their particular land use as shown in Table 4.10-2.

Table 4.10-2. Noise Contour and Compatibility with Proposed Actions at Langley AFB

<i>Project Title</i>	<i>Action</i>	<i>Compatibility</i>	<i>Noise Contour (dB)¹</i>
WRM/ ACCRSS Parking Lot	Construction of Parking Lot and pedestrian bridge	Compatible	85-90
EOD Training Range Relocation	Relocation/Construction of new EOD Training Range	Compatible	60-65
Construct New Visitors' Quarters	Construction of new Visitors' Quarters and associated parking lot	Compatible	70-75
Relocation of Government Fuel Station	Relocation and construction of new Government Fueling Station	Compatible	85-90
Alert Area Expansion	Construction of a new alert apron, and repair of the hangar and ramp	Compatible	85-90
<i>Note:</i> 1. <i>Source:</i> Air Force 2003			

Relocation of the EOD range will be from an area that is experiencing growth, to an area near the Munitions Storage area. EOD training operations will involve the use of one 5 pound NEW charge a maximum of 3 times per day for two days.

The EOD Training Range will be constructed to provide for the detonation of a maximum of five pounds of explosives for EOD proficiency training. This training would take place twice per week with up to 3 detonations per day. Modeling conducted using the BNoise 2 Large Arms Noise Assessment Model developed by the U.S. Army Construction Engineering Research Laboratories (USACERL 2003) has shown Peak sound levels of 150 dB 500 feet from the denotation and drop to 97dB Peak 1000 feet from the detonation The Naval Surface Warfare Center at Dahlgren has developed guidelines for conducting tests to minimize noise impacts on the surrounding community (Table 4.10-3) Peak Sound Levels of less than 115 dB have shown to produce a low risk of noise complaints or structural damage claims (Pater1976). The closest occupied structure is over 1500 feet from the detonation site, well away from the area expected to experience a risk of noise complaints or structural damage.

Table 4.10-3. Impulse Noise Guidelines

<i>Sound Level, dB Peak</i>	<i>Risk of Complaints</i>	<i>Action</i>
less than 115	Low risk of noise complaints	Fire all programs.
115 - 130	Moderate risk of noise complaints	Fire important tests. Postpone non-critical testing, if feasible.
130 - 140	High risk of noise complaints, possibility of damage	Fire only extremely important tests.
greater than 140	Threshold for permanent physiological damage to unprotected human ears — High risk of physiological and structural damage claims	Postpone all explosive operations.
<i>Source:</i> Naval Surface Warfare Center, Dahlgren Division 1976		

Due to the small amount of explosives to be used and the distance from sensitive biological receptors no adverse impacts are expected from the relocation of the EOD Training Range.

4.10.2 Alternatives

Alternatives to the proposed actions are primarily locational, therefore, impacts to alternatives would mirror the impacts associated with the proposed actions.

4.10.3 No-Action Alternative

Under the No-Action Alternatives construction, demolition, and relocation associated with the WINDO Projects would not occur. Noise levels would remain the same as they are currently.

5.0 CUMULATIVE EFFECTS AND IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

5.1 CUMULATIVE EFFECTS

This section provides (1) a definition of cumulative effects, (2) a description of past, present, and reasonably foreseeable actions relevant to cumulative effects, and (3) an evaluation of cumulative effects potentially resulting from these interactions.

5.1.1 Definition of Cumulative Effects

CEQ regulations stipulate that the cumulative effects analysis within an EA should consider the potential environmental impacts resulting from “the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions” (40 CFR 1508.7). Recent CEQ guidance in *Considering Cumulative Effects* affirms this requirement, stating that the first steps in assessing cumulative effects involve defining the scope of the other actions and their interrelationship with the proposed actions. The scope must consider geographic and temporal overlaps among the proposed actions and other actions. It must also evaluate the nature of interactions among these actions.

Cumulative effects are most likely to arise when a relationship or synergism exists between proposed actions and other actions expected to occur in a similar location or during a similar time period. Actions overlapping with, or in close proximity to, the proposed actions would be expected to have more potential for a relationship than actions that may be geographically separated. Similarly, actions that coincide, even partially, in time would tend to offer a higher potential for cumulative effects.

To identify cumulative effects, this EA addresses three questions:

- Does a relationship exist such that elements of the proposed actions might interact with elements of past, present, or reasonably foreseeable actions?
- If one or more of the elements of the proposed actions and another action could be expected to interact, would the proposed actions affect or be affected by impacts of the other action?
- If such a relationship exists, does an assessment reveal any potentially significant impacts not identified when the proposed actions are considered alone?

In this EA, an effort has been made to identify all actions that are being considered and that are in the planning phase at this time. To the extent that details regarding such actions exist and the actions have a potential to interact with the proposed actions in this EA, these actions are included in this cumulative analysis. This approach enables decision makers to have the most current information available so that they can evaluate the environmental consequences of the proposed actions.

5.1.2 Past, Present, and Reasonably Foreseeable Actions

This EA applies a stepped approach to provide decision makers with not only the cumulative effects of the proposed actions, but also the incremental contribution of past, present, and reasonably foreseeable actions.

PAST AND PRESENT ACTIONS RELEVANT TO THE PROPOSED ACTIONS

Langley AFB is an active military installation that undergoes continuous change in mission and in training requirements. This process of change is consistent with the U.S. defense policy that the Air Force must be ready to respond to threats to American interests throughout the world. In 1998, the Air Force implemented a force structure change that added 12 F-15C aircraft and 134 personnel to Langley AFB, increasing the total number of F-15C aircraft to 66. In 2001 Langley AFB was chosen as the beddown location of the Initial Operational Wing for 72 of the new F/A-22 aircraft. To support this beddown various projects including demolition and construction of three hangars, a new simulator building and other support buildings have been constructed or are under construction. Approximately 16 acres of the base along the flightline are under development to support the beddown.

The base, like any other major installation, also requires occasional new construction, facility improvements, and infrastructure upgrades. These improvements include demolition of the Steam Plant (80) in 2004. The base has been in operation since 1917 and many facilities have outlived their useful life and require extensive renovation or demolition. Demolition within the historic district in 2004 included the water tower (616). Langley AFB is currently upgrading portions of its water, storm water drainage system and electrical system and renovating the old Shopette (442). Also under construction is a new operations support center, and a new youth center. Construction is now complete on the new housing management office, dormitory complex, and reconstruction of the King Street Gate.

REASONABLY FORESEEABLE FUTURE ACTIONS

During the FY 05 to FY 08 timeframe, Langley AFB has proposed a number of actions that are independent of the proposed actions and would be implemented irrespective of a decision on the upgrade of facilities and services within the WINDO Plan. In order to redevelop portions of the base and to eliminate facilities that are obsolete, the base is considering demolition of various buildings within the historic district. These buildings include Greenhouse (1001), Dock (610), LTA single-family housing units (868, 869, 948, 949), and miscellaneous buildings 615, 731, 732, 735. Outside the historic district the AAFES gas station (258), Class VI store (272) and buildings 80 and 1033 are being considered for demolition.

Planned community support construction includes, expansion of the hospital and construction of a new AAFES mini-mall, redevelopment of the marina, reconstruction of the LaSalle and West gates, including widening of a portion of Sweeney Boulevard. The base is also planning a series of infrastructure improvements that include replacement of the existing 2 MGD potable water storage tank. Several facility construction projects are planned including the Air Force Command, and Control Intelligence, Surveillance, Reconnaissance Center (AFC2ISRC) facility,

the Distributed Common Ground System (DCGS) facility, and the Combat Arms Training Maintenance Range.

5.1.3 Analysis of Cumulative Impacts

The following analysis examines how the impacts of these other actions might be affected by the proposed actions and the alternatives at Langley AFB and whether such a relationship would result in potentially significant impacts not identified when the proposed actions and the alternatives are considered alone.

A previous EA for the implementation of a force structure change at Langley AFB and the construction of the new water tower did not identify any significant environmental consequences (Air Force 1998b, 2001d). The result of the force structure change left Langley AFB operating at levels below those occurring in the early 1990s. The establishment of a Combined Air Operations Center-Experimental and the beddown of the Aerospace Expeditionary Force Center, while adding a total of 122 new personnel, qualified for categorical exclusions because no new construction was required to support the actions.

The beddown of the Initial Operational Wing of F/A-22 aircraft has been analyzed in an Environmental Impact Statement (Air Force 2001b). Construction at Langley AFB would impact the architectural and visual aspects of the Langley Historic District. Given that the proposed F/A-22 construction would have a minimal effect on noise, air quality, and traffic, the combined environmental consequences of these actions would remain well below the threshold of significance for these resources.

None of the future infrastructure actions (analyzed in separate environmental documents) would be expected to result in more than negligible impacts either individually or cumulatively. Construction of the facilities identified in this EA would disturb approximately 12 acres of land that has been previously disturbed on the 2,883-acre Langley AFB. This construction along with other development proposals considered for the next 5 years (identified in section 5.1.2) is not anticipated to disturb more than 3 percent of the base. All actions affect very specific, circumscribed areas, and the magnitude of the actions is minimal. Given that the proposed actions, alternatives, and the No-Action Alternatives would likewise have a minimal effect within the base, the combined impacts of these actions would remain well below the threshold of significance for any resource category.

5.1.4 Irreversible and Irretrievable Commitment of Resources

NEPA requires that environmental analysis include identification of “. . . any irreversible and irretrievable commitments of resources which would be involved in the proposed actions should it be implemented.” Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that the uses of these resources have on future generations. Irreversible effects primarily result from the use or destruction of a specific resource (e.g., energy and minerals) that cannot be replaced within a reasonable time frame. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action (e.g., extinction of a threatened or endangered species or the demolition of a historic building).

For the proposed actions, most resource commitments are neither irreversible nor irretrievable. Most environmental consequences are short-term and temporary (such as air emissions from construction) or longer lasting but negligible (e.g., utility increases). Those limited resources that may involve a possible irreversible or irretrievable commitment under the proposed actions are discussed below.

Construction of the proposed facilities would require consumption of limited amounts of materials typically associated with interior and exterior construction (e.g., concrete, wiring, insulation, and windows) and the irretrievable commitment of fossil fuels through the use of vehicles necessary to remove demolition debris and construct the proposed facilities. The amount of these materials used is not expected to significantly decrease the availability of the resources.

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PERSONS AND AGENCIES CONTACTED

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- Goss, Matthew, 2005. EIAP Manager, 1 CES/CEVQA, Langley Air Force Base, Virginia.
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APPENDIX A
CONSULTATION LETTERS



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

FEB 23 2005

Ms. Karen L. Mayne
U.S. Fish and Wildlife Service
Virginia Field Office
6669 Short Lane
P.O. Box 99
Gloucester VA 23061

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9860

Dear Ms. Mayne

Langley Air Force Base (AFB) is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal for construction, demolition and relocation of facilities at Langley AFB.

The proposal consists of five elements:

(1) Government Fuel Station – The government gas and diesel refueling station would be relocated to a location off of Lee/Ward Road. This relocation would include new pavements, piping, electrical systems, and landscaping.

(2) Alert Area – The Alert Area project would include the expansion of the existing alert area ramp, repair of the taxiway, addition of perimeter security, and replacement of the alert hangar roof and doors. The study area for the expansion comprises approximately 130 acres in size.

(3) Visitor's Quarters – The existing Visitor's Quarters (Buildings #74 and #75), asphalt paving, concrete walkways and underground utilities would be demolished or removed. A four-story, approximately 36,000 square foot facility would be constructed on the northeast corner of Nealy Avenue and Tuskegee Airmen Boulevard. An adjacent parking area (133 spaces) would also be constructed.

(4) Explosive Ordnance Disposal (EOD) Training Range – The existing EOD Training Range would be relocated to a location on the east side of Gregg Road.

(5) War Reserve Material (WRM) Group and Air Combat Command Regional Supply Facility (ACCRSS) – Two parking areas (205 parking spaces), a pedestrian bridge, two entrance/exits, and a turn lane would be constructed to accommodate additional WRM and ACCRSS personnel.

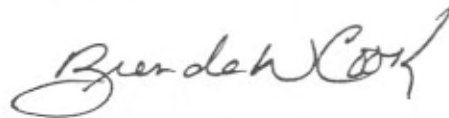
Global Power For America

This proposal is intended to upgrade facilities and services at Langley AFB. In addition to the proposed action, nine alternatives, and five no-action alternatives will be analyzed in the EA. Attachment 1 is a map that provides an overview of the proposed action areas.

Pursuant to analysis of the proposed action, as well as compliance with the Endangered Species Act, we would like to request information regarding listed threatened, endangered, and candidate species that occur or may occur in the potentially affected area. Please identify a point of contact for any follow-up questions we may have concerning the data you provide. We look forward to receiving your comments as part of this process.

Please send this information or any requests for additional information to Mr. Matt Goss, of the Environmental Management Flight, at (757) 764-1095.

Sincerely

A handwritten signature in black ink, appearing to read "Brenda W. Cook". The signature is fluid and cursive, with the first name "Brenda" being more prominent than the last name "Cook".

BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

Attachment:
Map of Proposed Action Areas



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

FEB 23 2005

Ms. Ellie Irons
Virginia Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, 6th Floor
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9839

Dear Ms. Irons

Langley Air Force Base (AFB) is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal for construction, demolition and relocation of facilities at Langley AFB.

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(3) Visitor's Quarters – The existing Visitor's Quarters (Buildings #74 and #75), asphalt paving, concrete walkways and underground utilities would be demolished or removed. A four-story, approximately 36,000 square foot facility would be constructed on the northeast corner of Nealy Avenue and Tuskegee Airmen Boulevard. An adjacent parking area (133 spaces) would also be constructed.

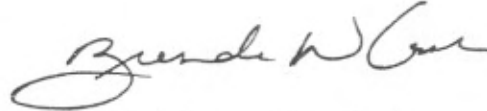
(4) Explosive Ordnance Disposal (EOD) Training Range – The existing EOD Training Range would be relocated to a location on the east side of Gregg Road.

(5) War Reserve Material (WRM) Group and Air Combat Command Regional Supply Facility (ACCRSS) – Two parking areas (205 parking spaces), a pedestrian bridge, two entrance/exits, and a turn lane would be constructed to accommodate additional WRM and ACCRSS personnel.

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This proposal is intended to upgrade facilities and services at Langley AFB. In addition to the proposed action, nine alternatives, and five no-action alternatives will be analyzed in the EA. Attachment 1 is a map that provides an overview of the proposed action areas.

If you have any specific concerns or questions about the proposed actions, please contact Mr. Matt Goss, of the Environmental Management Flight, at (757) 764-1095.

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BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

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Map of Proposed Action Areas



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

FEB 23 2005

Mr. Harold Winer
Virginia Department of Environmental Quality
Tidewater Regional Office
5636 Southern Boulevard
Virginia Beach VA 23462

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9846

Dear Mr. Winer

Langley Air Force Base (AFB) is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal for construction, demolition and relocation of facilities at Langley AFB.

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(3) Visitor's Quarters – The existing Visitor's Quarters (Buildings #74 and #75), asphalt paving, concrete walkways and underground utilities would be demolished or removed. A four-story, approximately 36,000 square foot facility would be constructed on the northeast corner of Nealy Avenue and Tuskegee Airmen Boulevard. An adjacent parking area (133 spaces) would also be constructed.

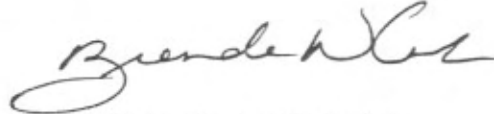
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Global Power For America

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BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

Attachment:
Map of Proposed Action Areas



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

FEB 23 2005

Mr. David Grimes
Virginia Department of Transportation
Environmental Division
1401 East Broad Street
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9853

Dear Mr. Grimes

Langley Air Force Base (AFB) is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal for construction, demolition and relocation of facilities at Langley AFB.

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Global Power For America

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BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

Attachment:
Map of Proposed Action Areas



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

FEB 23 2005

Mr. Kotus S. Narasimhan
Virginia Department of Environmental Quality
Air Data Analysis Program
629 East Main Street, 8th Floor
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9877

Dear Mr. Narasimhan

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Chief, Environmental Management Flight

Attachment:
Map of Proposed Action Areas



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

FEB 23 2005

Mr. Tom Modena
Virginia Department of Environmental Quality
Waste Division
629 East Main Street, 4th Floor
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9884

Dear Mr. Modena

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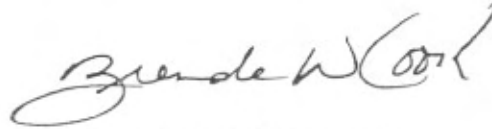
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BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

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Map of Proposed Action Areas



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

FEB 23 2005

Ms. Ellen Gilinsky
Virginia Department of Environmental Quality
Virginia Water Protection Program
629 East Main Street, 9th Floor
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9891

Dear Ms. Gilinsky

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BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

Attachment:
Map of Proposed Action Areas



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

FEB 23 2005

Mr. Keith Tignor
Virginia Department of Environmental Quality
Office of Plant & Pest Services
1100 Bank Street
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9907

Dear Mr. Tignor

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BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

Attachment:
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DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

FEB 23 2005

Ms. Catherine Harold
Chesapeake Bay Local Assistance Department
101 N. 14th Street, 17th Floor
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9914

Dear Ms. Harold

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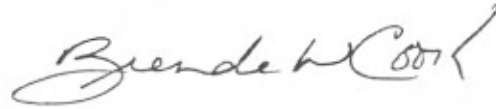
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Chief, Environmental Management Flight

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HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

FEB 4 3 2005

Mr. John Davy
Virginia Department of Conservation & Recreation
203 Governor Street
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9921

Dear Mr. Davy

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Chief, Environmental Management Flight

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DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

FEB 23 2005

Mr. Michael Foreman
Virginia Department of Forestry
900 Natural Resources Drive, Suite 800
Charlottesville VA 22903

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9938

Dear Mr. Foreman

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Chief, Environmental Management Flight

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DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

FEB 23 2005

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

Mr. Ray Fernald
Virginia Department of Game and Inland Fisheries
4010 West Broad Street
Richmond VA 23230

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9945

Dear Mr. Fernald

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DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

FEB 23 2005

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

Mr. Alan Weber
Virginia Department of Health
109 Governor Street, 6th Floor
Division of Drinking Water
Richmond VA 23219

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9952

Dear Mr. Weber

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Chief, Environmental Management Flight

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DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

FEB 23 2005

Mr. Gerald P. Wilkes
Virginia Department of Mines, Minerals and Energy
Division of Mineral Resources
P.O. Box 3667
Charlottesville VA 22903

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9969

Dear Mr. Wilkes

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Chief, Environmental Management Flight

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DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

FEB 23 2005

Mr. Thomas A. Barnard, Jr.
Virginia Marine Resources Commission
P.O. Box 1346
Gloucester Point VA 23062

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9976

Dear Mr. Barnard

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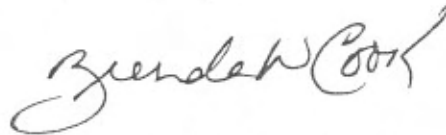
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Attachment:
Map of Proposed Action Areas



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

FEB 23 2005

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

Mr. Tony Watkinson
Virginia Marine Resources Commission
2600 Washington Avenue, 3rd Floor
Newport News VA 23607

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9983

Dear Mr. Watkins

Langley Air Force Base (AFB) is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal for construction, demolition and relocation of facilities at Langley AFB.

The proposal consists of five elements:

(1) Government Fuel Station – The government gas and diesel refueling station would be relocated to a location off of Lee/Ward Road. This relocation would include new pavements, piping, electrical systems, and landscaping.

(2) Alert Area – The Alert Area project would include the expansion of the existing alert area ramp, repair of the taxiway, addition of perimeter security, and replacement of the alert hangar roof and doors. The study area for the expansion comprises approximately 130 acres in size.

(3) Visitor's Quarters – The existing Visitor's Quarters (Buildings #74 and #75), asphalt paving, concrete walkways and underground utilities would be demolished or removed. A four-story, approximately 36,000 square foot facility would be constructed on the northeast corner of Nealy Avenue and Tuskegee Airmen Boulevard. An adjacent parking area (133 spaces) would also be constructed.

(4) Explosive Ordnance Disposal (EOD) Training Range – The existing EOD Training Range would be relocated to a location on the east side of Gregg Road.

(5) War Reserve Material (WRM) Group and Air Combat Command Regional Supply Facility (ACCRSS) – Two parking areas (205 parking spaces), a pedestrian bridge, two entrance/exits, and a turn lane would be constructed to accommodate additional WRM and ACCRSS personnel.

Global Power For America

This proposal is intended to upgrade facilities and services at Langley AFB. In addition to the proposed action, nine alternatives, and five no-action alternatives will be analyzed in the EA. Attachment 1 is a map that provides an overview of the proposed action areas.

If you have any specific concerns or questions about the proposed actions, please contact Mr. Matt Goss, of the Environmental Management Flight, at (757) 764-1095.

A handwritten signature in black ink, reading "Brenda W. Cook". The signature is fluid and cursive, with the last name "Cook" being more prominent.

BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

Attachment:
Map of Proposed Action Areas



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS 1ST FIGHTER WING
LANGLEY AIR FORCE BASE VA

1 CES/CEV
37 Sweeney Boulevard
Langley AFB VA 23665-2107

FEB 23 2005

Ms. Ethel Eaton
Virginia Department of Historic Resources
2801 Kensington Avenue
Richmond VA 23221

CERTIFIED MAIL
RETURN RECEIPT
7004 0750 0001 7466 9990

Dear Ms. Eaton

Langley Air Force Base (AFB) is in the process of preparing an Environmental Assessment (EA) to assess the potential environmental impacts of a proposal for construction, demolition and relocation of facilities at Langley AFB.

The proposal consists of five elements:

(1) Government Fuel Station – The government gas and diesel refueling station would be relocated to a location off of Lee/Ward Road. This relocation would include new pavements, piping, electrical systems, and landscaping.

(2) Alert Area – The Alert Area project would include the expansion of the existing alert area ramp, repair of the taxiway, addition of perimeter security, and replacement of the alert hangar roof and doors. The study area for the expansion comprises approximately 130 acres in size.

(3) Visitor's Quarters – The existing Visitor's Quarters (Buildings #74 and #75), asphalt paving, concrete walkways and underground utilities would be demolished or removed. A four-story, approximately 36,000 square foot facility would be constructed on the northeast corner of Nealy Avenue and Tuskegee Airmen Boulevard. An adjacent parking area (133 spaces) would also be constructed.

(4) Explosive Ordnance Disposal (EOD) Training Range – The existing EOD Training Range would be relocated to a location on the east side of Gregg Road.

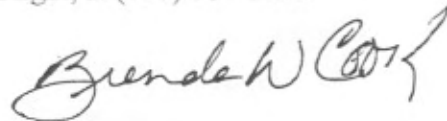
(5) War Reserve Material (WRM) Group and Air Combat Command Regional Supply Facility (ACCRSS) – Two parking areas (205 parking spaces), a pedestrian bridge, two entrance/exits, and a turn lane would be constructed to accommodate additional WRM and ACCRSS personnel.

Global Power For America

This proposal is intended to upgrade facilities and services at Langley AFB. In addition to the proposed action, nine alternatives, and five no-action alternatives will be analyzed in the EA. Attachment 1 is a map that provides an overview of the proposed action areas.

We are beginning the process of identifying applicable cultural resources information for the proposed action areas. We would appreciate any assistance you could provide in identifying and retrieving this important information, as well as concerns you may have about the potential effects of the proposal on significant cultural resources.

If you have any specific concerns or questions about the proposed actions, please contact Mr. Matt Goss, of the Environmental Management Flight, at (757) 764-1095.

A handwritten signature in black ink, reading "Brenda W. Cook". The signature is fluid and cursive, with the first name "Brenda" being the most prominent part.

BRENDA W. COOK, GS-13
Chief, Environmental Management Flight

Attachment:
Map of Proposed Action Areas

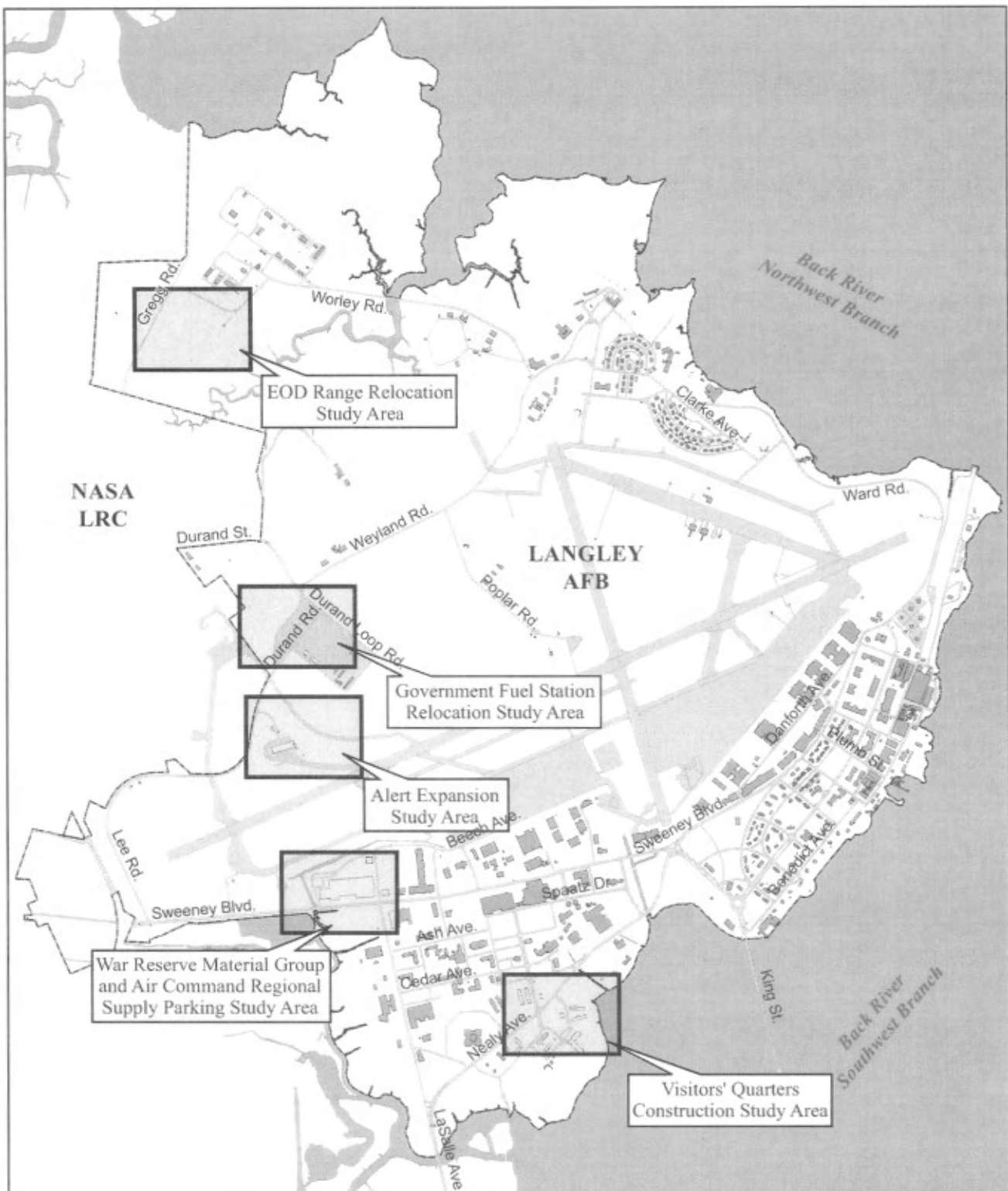


Figure 1-1
Langley AFB, Virginia





United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
6669 Short Lane
Gloucester, VA 23061



Date: March 14, 2005

Project name: Construction, Demolition, & Relocation EA at Langley AFB

Project number: 9190 City/County, VA Hampton

The U.S. Fish and Wildlife Service (Service) has reviewed your request for information on federally listed or proposed endangered or threatened species and designated critical habitat for the above referenced project. The following comments are provided under provisions of the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

 We believe that the proposed action will not adversely affect federally listed species or federally designated critical habitat because no federally listed species are known to occur in the project area. Should project plans change or if additional information on listed and proposed species becomes available, this determination may be reconsidered.

 We recommend that you contact **both** of the following State agencies for site specific information on listed species in Virginia. Each agency maintains a different database and has differing expertise and/or regulatory responsibility:

Virginia Dept. of Game & Inland Fisheries
Environmental Services Section
P.O. Box 11104
Richmond, VA 23230
(804) 367-1000

Virginia Dept. of Conservation and Recreation
Division of Natural Heritage
217 Governor Street, 2nd Floor
Richmond, VA 23219
(804) 786-7951

If neither State agency indicates concerns regarding **federally** listed species, further ESA coordination with this office is not necessary. If either agency indicates a federally listed species **is present**, please resubmit your project description with letters from both agencies attached.

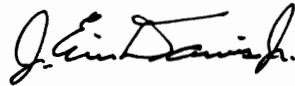
☒ If **appropriate habitat may be present**, we recommend surveys within appropriate habitat by a qualified surveyor. Enclosed are county lists with fact sheets that contain information the species' habitat requirements and lists of qualified surveyors. If this project involves a Federal agency (Federal permit, funding, or land), we encourage the Federal agency to contact this office if appropriate habitat is present and if they determine their proposed action is likely to affect federally listed species or critical habitat.

_____ Enclosed is information about communication towers and measures to minimize and avoid impacts to migratory birds, including a list of types of work that do not require further coordination with the Service.

✓ Determinations of the presence of waters of the United States, including wetlands, and the need for permits are made by the U.S. Army Corps of Engineers. They may be contacted at: Regulatory Branch, U.S. Army Corps of Engineers, Norfolk District, 803 Front Street, Norfolk, Virginia 23510, telephone (757) 441-7652.

Our website <http://virginiafieldoffice.fws.gov> contains many resources that may assist with project reviews. Point of contact is Eric Davis at (804) 693-6694, ext. 104.

Sincerely,



Karen L. Mayne
Supervisor
Virginia Field Office

KEY

LE - federally listed endangered.

LT - federally listed threatened.

PE - federally proposed endangered.

PT - federally proposed threatened.

EX - believed to be extirpated in Virginia.

LE(S/A) - federally listed endangered due to similarity of appearance to a federally listed species.

LT(S/A) - federally listed threatened due to similarity of appearance to a federally listed species.

C - candidate species; the U.S. Fish and Wildlife Service has enough information to list the species as threatened or endangered, but this action is precluded by other listing activities.

SOC - species of concern; those species that have been identified as potentially imperiled or vulnerable throughout their range or a portion of their range. These species are not protected under the Endangered Species Act.

G - global rank; the species rarity throughout its total range.

G1 - extremely rare and critically imperiled with 5 or fewer occurrences or very few remaining individuals; or because of some factor(s) making it especially vulnerable to extinction.

G2 - very rare and imperiled with 6 to 20 occurrences or few remaining individuals; or because of some factor(s) making it vulnerable to extinction.

G3 - either very rare and local throughout its range or found locally (abundantly at some of its locations) in a restricted range; or vulnerable to extinction because of other factors. Usually fewer than 100 occurrences are documented.

G_T_ - signifies the rank of a subspecies or variety. For example, a G3T1 would apply to a subspecies of a species that is very rare and local throughout its range or found locally in a restricted range (G3) but the subspecies warrants a rank of T1, critically imperiled.

G_Q - The taxon has a questionable taxonomic assignment.

CITY OF HAMPTON, VIRGINIA
Federally Listed, Proposed, and Candidate Species

<u>SCIENTIFIC NAME</u>	<u>COMMON NAME</u>	<u>STATUS</u>
<u>BIRDS</u>		
Charadrius melodus	Piping plover	LT
Haliaeetus leucocephalus	Bald eagle	LT
<u>INVERTEBRATES</u>		
Cicindela dorsalis dorsalis	Northeastern beach tiger beetle	LT

Species of Concern (No official Federal status)

<u>VASCULAR PLANTS</u>		
Trillium pusillum var. virginianum	Virginia least trillium	G3T2

May 29, 2001

Prepared by U.S. Fish and Wildlife Service, Virginia Field Office

Piping Plover

Charadrius melodus



© J. Zickefoose

Description - Piping plovers occur in three disjunct populations in North America: Northern Great Plains, Great Lakes, and Atlantic Coast. The piping plover is a 5 ½ inch long pale grayish-brown shorebird with a white breast. During the breeding season, it has a black breast band which is sometimes incomplete and a black bar between its eyes. The bill is dull orange with a black tip and the legs and feet are orange.

Life History - The piping plover nesting season is from late April to late July with one brood raised per year. If there is a disturbance or the nest is lost, the birds may renest. Plovers nest on beaches, dunes, and washover areas. They also nest on areas where suitable dredged material is deposited. The nest is a shallow scrape in the sand dug by the adults and is usually lined with broken seashells and small pebbles. The female usually lays four eggs. The chicks are mobile and able to feed themselves within hours of hatching. Piping plovers feed on small invertebrates in intertidal surf

zones, mud flats, tidal pool edges, barrier flats, and sand flats and along the ocean and barrier bays. Plovers migrate to breeding grounds from February through early April, and to wintering grounds from late July through September.

Conservation - The piping plover was federally listed as a threatened species along the Atlantic Coast on January 10, 1986. In the Northern Great Plains, it is federally listed threatened and in the Great Lakes, endangered. Destruction and degradation of habitat and disturbance during the nesting season by humans and pets are threats to this species. Piping plovers are extremely sensitive to disturbance during the nesting season. Predation by red foxes, skunks, raccoons, feral cats, herring gulls, fish crows, grackles, and ghost crabs is an additional threat to the eggs and young.

What You Can Do To Help - Respect all signed or fenced shorebird nesting areas; stay as far away from these areas as possible. The birds and their eggs blend in with the sand and are difficult to see. Young birds are particularly vulnerable before they can fly and can be killed by vehicles or trapped in vehicle tracks. Watch for signs of adult birds calling, displaying a feigned broken wing, or flying or running ahead of you. Keep pets leashed or indoors during the nesting season; both dogs and cats are known to prey on eggs and chicks. Take care not to discard trash or food scraps on beaches used by nesting birds, as they attract predators that may prey on eggs

and/or chicks.

To find out more about the piping plover contact:

Virginia Department of Game and Inland Fisheries
P.O. Box 11104
Richmond, Virginia 23230
(804) 367-1000

References

- Cross, R.C. 1991. Piping plover. Pages 501-502 in K. Terwilliger, ed. Virginia's Endangered Species, Proceedings of a Symposium. McDonald and Woodward Publishing Company, Blacksburg, Virginia.
- U.S. Fish and Wildlife Service. 1985. Endangered and Threatened Wildlife and Plants: Determination of endangered and threatened status for the piping plover; final rule. Federal Register 50(238):50726-59734.
- U.S. Fish and Wildlife Service, Region 5. 1994. You can help protect the piping plover. Newton Corner, Massachusetts.
- U.S. Fish and Wildlife Service. 1996. Piping plover (*Charadrius melodus*) Atlantic Coast population, revised recovery plan. Hadley, Massachusetts.



U.S. Fish and Wildlife Service
Virginia Field Office
6669 Short Lane
Gloucester, Virginia 23061
(804) 693-6694
<http://www.fws.gov>
August 1999

Bald Eagle

Haliaeetus leucocephalus



Description - The bald eagle occurs throughout the United States. It is a large bird-of-prey with dark brown plumage, a white head and tail, and a yellow bill, feet, and eyes. Juvenile eagles generally have a dark brown body, sometimes with white patches on the tail, belly, and underwings. The head and tail become completely white when full adult plumage is reached at four to five years of age.

Life History - The majority of Virginia's eagle population is found on the coastal plain. The bald eagle breeding season begins in mid-November when large nests are built (or the previous year's nest is repaired) usually in loblolly pine trees that are in close proximity to water. Eagles lay one to three eggs between mid-January and late March. In March, most eggs hatch and by June or July most young have fledged. However, the young will continue to use the nest for several weeks. In Virginia, during the summer and winter months, juvenile and nonbreeding adult eagles congregate along large rivers in areas with abundant food and little human

disturbance. During the day, these eagles feed and perch along the river shoreline. In late afternoon, they move inland to roost either singly or communally. Roosts are typically located away from human disturbance and near water and a food source. Bald eagles feed primarily on fish, but will also eat carrion, waterfowl, small mammals, snakes, and turtles.

Conservation - The bald eagle was federally listed as an endangered species in the Chesapeake Bay Region on March 11, 1967. On July 12, 1995, the bald eagle was reclassified to threatened throughout the 48 lower states because the population had increased due to the banning persistent pesticides, habitat protection, and other recovery activities. On July 6, 1999, the bald eagle was proposed for removal from the list of endangered and threatened wildlife in the lower 48 states. This action was proposed because the available data indicated that this species has recovered. The recovery is due in part to habitat protection and management actions initiated under the Endangered Species Act. It is also due to reduction in levels of persistent pesticides occurring in the environment. If and when the eagle is no longer protected by the Endangered Species Act, it will still be protected by the Bald and Golden Eagle Protection Act, Migratory Bird Treaty Act, and state laws. Until the eagle is officially delisted, it will continue to receive protection pursuant to the Endangered Species Act. Bald eagles in the Chesapeake Bay are increasing. However, habitat destruction through urban and

residential development and human disturbance in nesting, roosting, and

foraging habitats continue to be a threat.

What You Can Do To Help - If you know of a bald eagle nest on or near property proposed for clearing, development, or logging please contact one of the following agencies for assistance:

Virginia Department of Game and Inland Fisheries
P.O. Box 11104
Richmond, Virginia 23230
(804) 367-1000

U. S. Fish and Wildlife Service
6669 Short Lane
Gloucester, Virginia 23061
(804) 693-6694

References

U.S. Fish and Wildlife Service. 1990. Chesapeake Bay Region bald eagle recovery plan: first revision. Newton Corner, Massachusetts.

U.S. Fish and Wildlife Service. 1999. Proposed rule to remove the bald eagle in the lower 48 states from the list of endangered and threatened wildlife. Federal Register 64(128): 36453-36464.

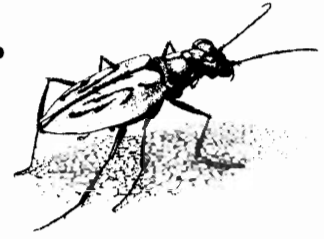
Watts, B.D., K.W. Cline, and M.A. Byrd. 1994. The bald eagle in Virginia: An information booklet for land planners. The Center for Conservation Biology, College of William and Mary, Williamsburg, Virginia.



U.S. Fish and Wildlife Service
Virginia Field Office
6669 Short Lane
Gloucester, Virginia 23061
(804) 693-6694
<http://www.fws.gov>
August 1999

Northeastern Beach Tiger Beetle

Cicindela dorsalis dorsalis



© K. Brown-Wing

Description - Historically, the northeastern beach tiger beetle was common on coastal beaches from Massachusetts to central New Jersey, and along the Chesapeake Bay in Maryland and Virginia. Currently, the only populations known to exist along the Atlantic Coast are in New Jersey and southeastern Massachusetts. The majority of populations occur in the Chesapeake Bay. This insect measures 0.5 inches in length. It has white to light tan wing covers, often with several fine grayish-green lines, and a bronze-green head and body.

Life History - Adult and larval tiger beetles are found on long, wide, dynamic beaches that have little human and vehicular activity, fine sand-particle size, and a high degree of exposure to tidal action. Adult beetles are present from June through August and are active on warm, sunny days where they can be seen feeding, mating, or basking along the water's edge. Adults are

active predators that forage on small invertebrates or scavenge on dead fish, crabs, and amphipods. Larvae are sedentary predators that live in well-formed burrows from which they extend to capture passing prey. During the summer, adult tiger beetles lay eggs on the beach. After hatching, the larvae pass through three developmental stages and emerge from their burrows as adults two years following egg-laying.

Conservation - The northeastern beach tiger beetle was federally listed as a threatened species on August 7, 1990. Few northeastern beach tiger beetle sites are protected and many are threatened by human activities. Loss of this beetle from most of its range has been attributed primarily to destruction and disturbance of natural beach habitat from shoreline development, beach stabilization, and high levels of recreational use. Additional threats include pollution, pesticides, oil slicks, and off-road vehicle traffic. Natural limiting factors include winter storms, beach erosion, flood tides, hurricanes, parasites, and predators. Recovery for the tiger beetle depends to a large extent on re-establishing the subspecies across its former range along the Atlantic Coast and protecting it within the Chesapeake Bay.

What You Can Do To Help - If you plan to stabilize a tidal beach along the Chesapeake Bay or its tributaries, please contact the U.S. Fish and Wildlife Service.

Such activity may require a federal permit, for more information contact:

U.S. Army Corps of Engineers
Norfolk District
803 Front Street
Norfolk, Virginia 23510-1096
(757) 441-7652

References

Knisley, C.B. 1991. Northeastern beach tiger beetle. Pages 233-234 in K. Terwilliger, ed. Virginia's Endangered Species, Proceedings of a Symposium. McDonald and Woodward Publishing Company, Blacksburg, Virginia.

Knisley, C.B., J.I. Luebke, and D.R. Beatty. 1987. Natural history and population decline of the coastal tiger beetle, *Cicindela dorsalis dorsalis* Say (Coleoptera: Cicindelidae). Virginia Journal of Science 38: 293-303.

U.S. Fish and Wildlife Service. 1994. Northeastern beach tiger beetle (*Cicindela dorsalis dorsalis* Say) recovery plan. Hadley, Massachusetts.



U.S. Fish and Wildlife Service
Virginia Field Office
6669 Short Lane
Gloucester, Virginia 23061
(804) 693-6694
<http://www.fws.gov>
August 1999

VIRGINIA LEAST TRILLIUM
(*Trillium pusillum* var. *virginianum*)
SURVEY CONTACTS

LISTED IN ALPHABETICAL ORDER

Ted Bradley
George Mason University
Department of Biology
Fairfax, Virginia 22030-4444
(703) 993-1050

Douglas A. DeBerry
Williamsburg Environmental Group
3000 Easter Circle
Williamsburg, VA 23188
ph (757) 220-6869
fax (757) 229-4507
www.wegnet.com

Chris Ludwig
Division of Natural Heritage
217 Governor Street, 3rd Floor
Richmond, VA 23219
(804) 786-7951

Dr. Donna Ware
Department of Biology
The College of William and Mary
Williamsburg, VA 23187
(757) 221-2213

Inclusion of names on this list does not constitute endorsement by the U.S Fish and Wildlife Service or any other U.S. Government agency.

May 2, 2004

NORTHEASTERN BEACH TIGER BEETLE
(Cicindela dorsalis dorsalis)
SURVEY CONTACTS IN VIRGINIA

This list contains individuals who we have already determined are qualified to conduct surveys for the species listed above. This list does not include all individuals qualified or authorized to survey for this species. If you select someone not on this pre-approved surveyor list, please provide the proposed surveyor's qualifications to this office 30 days prior to the start of the survey. Please send copies of all survey results to this office. If the survey determines that any rare species are present, please contact this office to allow us the opportunity to work with you to ensure that a project avoids or minimizes adverse effects to rare species and their habitats. Inclusion of names on this list does not constitute endorsement by the U.S. Fish and Wildlife Service or any other U.S. Government agency. Listed alphabetically. September 9, 2004.

Jim Hill
Rt. 1, Box 2746-A
Reedville, VA 22539
(804) 453-3315

Barry Knisley
Department of Biology
Randolph-Macon College
Ashland, VA 23005
(804) 752-7254
bknisley@rmc.edu

Steve Roble
Virginia Division of Natural Heritage
217 Governor Street, 3rd Floor
Richmond, VA 23219
(804) 786-7951
sroble@dcr.state.va.us



COMMONWEALTH of VIRGINIA

Department of Historic Resources

2801 Kensington Avenue, Richmond, Virginia 23221

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

Kathleen S. Kilpatrick
Director

15 March 2005

Tel: (804) 367-2323
Fax: (804) 367-2391
TDD: (804) 367-2386
www.dhr.state.va.us

Ms Brenda W. Cook
1 CES/CEV
37 Sweeney Boulevard, Langley Air Force Base
Hampton, Virginia 23665-2107

Re: Initiation of Consultation Regarding Development of an EA for Several Projects
Langley Air Force Base
Hampton, Virginia
DHR File No. 2005-0201

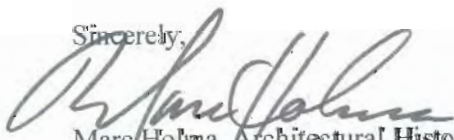
Dear Ms Cook:

We have received your letter of 23 February 2005 regarding the initiation of consultation regarding the development of an Environmental Assessment (EA) for several projects at Langley Air Force Base located in Hampton, Virginia. The projects covered by the EA include relocation of the government fuel station to a location off of Lee/Ward Road, expansion of the Alert Area and repair of existing taxiways, construction of an approximately 36,000 square-foot visitor's quarters and adjacent parking area, relocation of the existing Explosive Ordnance Disposal (EOD) Training Range to a location on the east side of Gregg Road, and associated improvements to the War Reserve Material (WRM) Group and Air Combat Command Regional Supply Facility (ACCRSS).

Many of these proposed projects have the potential to affect known historic properties determined eligible for listing in the National Register of Historic Places. Specifically, a number of the projects occur within the identified boundary of the National Register-eligible Langley Air Force Base Historic District. If the Air Force intends to incorporate its Section 106 responsibilities into the National Environmental Policy Act (NEPA), we request that the EA include a thorough discussion regarding the potential of these undertakings to affect significant historic properties, including archaeological sites. We look forward to reviewing and commenting on the EA once available.

If you have any questions about the Section 106 review process or our comments, please call me at (804) 367-2323, Ext. 114.

Sincerely,


Marc Holma, Architectural Historian
Office of Review and Compliance

Administrative Services
10 Courthouse Avenue
Petersburg, VA 23803
Tel: (804) 863-1624
Fax: (804) 862-6196

Capital Region Office
2801 Kensington Ave.
Richmond, VA 23221
Tel: (804) 367-2323
Fax: (804) 367-2391

Portsmouth Region Office
612 Court Street, 3rd Floor
Portsmouth, VA 23704
Tel: (757) 396-6707
Fax: (757) 396-6712

Roanoke Region Office
1030 Penmar Ave., SE
Roanoke, VA 24013
Tel: (540) 857-7585
Fax: (540) 857-7588

Winchester Region Office
107 N. Kent Street, Suite 203
Winchester, VA 22601
Tel: (540) 722-3427
Fax: (540) 722-7535



COMMONWEALTH of VIRGINIA

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

Department of Game and Inland Fisheries

William L. Woodfin, Jr.
Director

March 24, 2005

Brenda W. Cook, GS-13
Chief, Environmental Management Flight
Department of the Air Force
Headquarters 1st Fighter Wing
1CES/CEV
37 Sweeney Boulevard
Langley AFB, VA 23665-2107

RE: ESSLOG #20253, Proposed Construction, Demolition, and Relocation of Facilities
(Government Fuel Station, Alert Area, Visitors' Quarters, EOD Training Range, and WRM Group
and ACCRSS) at Langley Air Force Base, VA.

Dear Ms. Cook:

This letter is in response to your request for information related to the presence of threatened or endangered species in the vicinity of the above referenced project.

Note → The federal threatened/state threatened bald eagle (*Haliaeetus leucocephalus*) has been documented approximately 2 miles from the Alert Area Expansion Study Area. Also, the state endangered canebrake rattlesnake (*Crotalus horridus*) has been documented approximately 0.75 mile from the Visitors' Quarters Construction Study Area. Therefore, the applicant should coordinate with the VDGIF Environmental Services Section (804-367-6913) concerning potential impacts to these species.

Additionally, the federal species of concern northern diamond-backed terrapin (*Malaclemys terrapin terrapin*) has been documented within 0.25 mile of the EOD Training Range Relocation Study Area. Also, the following state special concern species have been documented at approximately the given distances from the given sites:

1 mile from EOD Training Range Relocation Study Area:

Forster's tern (*Sterna forsteri*);
least tern (*Sterna antillarum*); and
great egret (*Ardea alba*).

Within or adjacent to WRM Group and ACCRSS Study Area:

great egret (*Ardea alba*) and
yellow-crowned night-heron (*Nyctanassa violacea*).

Brenda W. Cook, GS-13

ESSLog #20253

3/24/2005

Page 2

Visitors' Quarters Construction Study Area:

Forster's tern (*Sterna forsteri*) at 0.5 mile;
least tern (*Sterna antillarum*) at 0.5 mile;
Caspian tern (*Sterna caspia*) at 1.75 miles;
northern harrier (*Circus cyaneus*) at 1.75 miles;
great egret (*Ardea alba*) at 0.5 mile;
yellow-crowned night-heron (*Nyctanassa violacea*) at 0.5 mile; and
glossy ibis (*Plegadis falcinellus*) at 1.25 miles.

As well, a block survey of an area encompassing the Government Fuel Station Relocation Study Area documented the following *state special concern* species during the breeding season: saltmarsh sharp-tailed sparrow (*Ammodramus caudacutus*) and Caspian tern (*Sterna caspia*). However, the classifications of *federal species of concern* and *state special concern* are not legal designations and do not require further coordination.

Information about fish and wildlife species was generated from our agency's computerized Fish and Wildlife Information System, which describes animals that are known or may occur in a particular geographic area. Field surveys may be necessary to determine the presence or absence of some of these species on or near the proposed area. Also, additional sensitive animal species may be present, but their presence has not been documented in our information system.

Endangered plants and insects are under the jurisdiction of the Virginia Department of Agriculture and Consumer Services, Bureau of Plant Protection. Questions concerning sensitive plant and insect species occurring at the project site should be directed to Keith Tignor at (804) 786-3515.

The Virginia Department of Conservation and Recreation, Natural Heritage Program, maintains a database of natural heritage resources, including the habitat of rare, threatened, or endangered plant and animal species, unique exemplary natural communities, and significant geologic formations, that may contain information not documented in this letter. Their database may be accessed from <http://www.dcr.state.va.us/dnh/nhrinfo.htm>, or by contacting S. Rene Hypes at (804) 371-2708.

This letter summarizes the likelihood of the occurrence of endangered or threatened animal species at the project site. If you have additional questions in this regard, please contact me at (804) 367-1185.

Please note that this response does not constitute consultation or management recommendations regarding endangered or threatened wildlife, or any other environmental concerns. These issues are analyzed by our Environmental Services Section, in conjunction with interagency review of applications for state and federal permits. If you have any questions in this regard, please [contact the Environmental Services Section](#) at (804) 367-6913.

Brenda W. Cook, GS-13

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3/24/2005

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Please note that the data used to develop this response are continually updated. Therefore, if significant changes are made to your project or if the project has not begun within 6 months of receiving this letter, then the applicant should request a new review of our data.

The Fish and Wildlife Information Service, the system of databases used to provide the information in this letter, can now be accessed via the Internet! The Service currently provides access to current and comprehensive information about all of Virginia's fish and wildlife resources, including those listed as threatened, endangered, or special concern; colonial birds; waterfowl; trout streams; and all wildlife. Users can choose a geographic location and generate a report of species known or likely to occur around that point. From our main web page, at www.dgif.virginia.gov, choose the hyperlinks to "Wildlife" then "Wildlife Information and Mapping Services", and then "Virginia Fish and Wildlife Information Service". For more information about the service, please contact Shirl Dressler at (804) 367-6913.

Thank you for your interest in the wildlife resources of Virginia.

Sincerely,

A handwritten signature in cursive script, reading "Susan H. Watson". The signature is written in dark ink and is positioned above the printed name and title.

Susan H. Watson
Research Specialist Senior

cc: R.T. Fernald, VDGIF
R. Hypes, VDCR-NH

-----Original Message-----

From: Amy Martin [<mailto:Amy.Martin@dgif.virginia.gov>]

Sent: Wednesday, April 06, 2005 2:20 PM

To: Matthew.Goss@langley.af.mil

Subject: Re: ESSLOG #20253 - Langley AFB, supplemental information

Mr. Goss,

Thank you for the pictures of the VQ site. I wanted to double check just to make sure we didn't have any concerns regarding the State Endangered canebrake rattlesnake (*Crotalus horridus*). According to the pictures you sent, I do not anticipate that there would be any viable populations of canebrake on site. The habitat that they prefer is not located in your impact area. Therefore, we do not anticipate significant adverse impacts to listed wildlife species under our jurisdiction as a result of this project. Further coordination with our Department is not necessary.

Please contact me if I can be of further assistance. Thank you.

Amy Martin

Environmental Services Biologist

Wildlife Diversity Division, VDGIF

4010 W. Broad Street

Richmond, VA 23230

phone: 804-367-2211

fax: 804-367-2427

amy.martin@dgif.virginia.gov

>>> Goss Matthew C Civ 1 CES/CEVC <Matthew.Goss@langley.af.mil> 04/06/05

>>> 02:04PM >>>

Ms. Martin,

As we discussed this morning, here are the pictures of the proposed site for the VQ. The double-wide trailer is temporary and will go away. The two shoebox buildings in the background will be demolished. The VQ and associated parking lot will be located in the area including the field in the foreground of the pictures, the trailer and the 2 shoebox buildings. Please let me know if you need any further information on this item.

v/r

Matt

Matt Goss

1 CES/CEVQA

Environmental Analysis/Natural Resources

(757) 764-1095

DSN 574-1095

<<VQ site 005.jpg>> <<VQ site 001.jpg>> <<VQ site 002.jpg>> <<VQ site 003.jpg>> <<VQ site 004.jpg>>

COMMONWEALTH of VIRGINIA

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
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Robert G. Burnley
Director

(804) 698-4000
1-800-592-5482

June 17, 2005

Mr. Matt Goss
Langley AFB Environmental Flight
1 CES/CEV
37 Sweeney Boulevard
Langley AFB, Virginia 23665-2107

RE: Draft Environmental Assessment and Consistency Determination for the Wing Infrastructure Development Outlook (WINDO) Plan, Langley Air Force Base, City of Hampton, Virginia (DEQ 05-118F).

Dear Mr. Goss:

The Commonwealth of Virginia has completed its review of the Draft Environmental Assessment (EA) and Consistency Determination for the above referenced project. The Department of Environmental Quality is responsible for coordinating Virginia's review of federal environmental documents and responding to appropriate federal officials on behalf of the Commonwealth. Also, as you are aware, pursuant to the Coastal Zone Management Act of 1972, as amended, federal actions that can have foreseeable effects on Virginia's coastal uses or resources must be conducted in a manner which is consistent, to the maximum extent practicable, with the Virginia Coastal Resources Management Program (VCP). The DEQ, as the lead agency for the VCP, is responsible for coordinating Virginia's review of federal consistency determinations. The following agencies, planning district commission, and locality took part in the review of the EA:

Department of Environmental Quality
Department of Game and Inland Fisheries
Department of Conservation and Recreation
Marine Resources Commission
Department of Agriculture and Consumer Services
Department of Mines, Minerals, and Energy
Department of Health
Department of Historic Resources

Department of Transportation
City of Hampton
Hampton Roads Planning District Commission

Project Description

The 1st Fighter Wing (1 FW) located at Langley Air Force Base (AFB) proposes to upgrade facilities and services associated within the Wing Infrastructure Development Outlook (WINDO) Plan at the base in the City of Hampton. The development plan contains five projects:

- Government Fuel Station Relocation
- Alert Area Expansion
- Visitor's Quarters Construction
- Explosive Ordnance Disposal (EOD) Training Range Relocation
- War Reserve Material Group (WRM) and Air Comber Command Regional Supply (ACCRSS) Parking Area Construction

The EA submitted for the project concludes that implementing the WINDO projects would not result in significant impact to the environment. Therefore, issuance of a Finding of No Significant Impact (FONSI) is warranted, and an environmental impact statement (EIS) is not required. Furthermore, the Air Force found the proposed action consistent with the enforceable policies of the Virginia Coastal Resources Management Program (VCP).

Environmental Impacts and Mitigation

1. Water Quality & Wetlands. According to the EA (page 4-11) there would be no significant impacts to water resources from point source or non-point sources with implementation of the proposed actions. The Air Force anticipates that development of the proposed actions would include new impermeable surfaces that would generate additional stormwater runoff. Prior to the start of construction, the Air Force intends to install silt fences, storm drain inlet and outlet protection, and other appropriate standard construction practices.

The EA (page 4-10) states that standard construction practices and regulatory requirements would be implemented prior to the start of any work in adjacent wetland areas. The Air Force anticipates that the construction of the WRM Group and ACCRSS parking area may result in minor wetland impacts. The EA states that the other elements to the proposed action would not impact wetlands. Any impacts would be addressed by the Air Force by way of permit authorization (EA, page 4-10).

DEQ notes that the proposed project will clearly involve impacts to surface waters, including wetlands. As such, a Joint Permit Application (JPA) documenting that impacts to these areas have been avoided and minimized to the maximum extent practicable

should be prepared and submitted to DEQ and other state/local regulatory bodies for review and authorization prior to commencing work. Based on the very limited level of detail associated with this document, it appears that some proposed impacts to surface waters including wetlands may be avoidable. Until additional information is available in the context of a JPA, the need for revisions to the proposed actions can not be assessed further. While the EA clearly recognizes the need to obtain Federal, State and Local government permits, several technical errors exist in these discussions.

- Section 2.5.3, paragraph 2, limits the need to submit a Joint Permit Application to "...jurisdictional wetlands or waters of the U.S. (33 CFR Part 328)..." While this federal regulatory citation is clearly applicable to the federal permitting process in that it defines "Waters of the United States", it has little, if any bearing on DEQ's regulatory authority. Under Virginia Law, there is no need to find that a water or wetland meets the definition of "Waters of the United States" for those waters or wetlands to be regulated. In fact, Virginia has independent regulatory authority over these areas that clearly exceed that contained in the Clean Water Act. DEQ suggests that references to "jurisdictional wetlands or waters of the U.S" be corrected to read "waters or wetlands regulated by State and/or Federal law and regulation."
- Section 2-5-3, paragraph 3, appears to suggest that only the "relocation of any existing stormwater infrastructure would be addressed through the Virginia Water Protection Permit (VWPP) program administered by Commonwealth of Virginia, VDEQ (V.A.C., 62.1-44.15.5)." This "regulatory" citation is incorrect. The referenced section does not exist in Virginia Administrative Code (regulation) or the Code of Virginia (law) and should be corrected. The proper Code section is "Virginia Code § 62.1-44.15:5." The regulation promulgated under Virginia law should be cited as "9VAC25-210-10 et seq." Again, these regulatory requirements are significantly more encompassing than represented in the document.

Please note that the Commonwealth does not support the filling of wetlands, particularly when alternative sites have been identified. It is the policy of the Commonwealth of Virginia to first avoid impacts to wetlands before considering other mitigation measures such as compensation. The Virginia Water Protection permit regulations state that "mitigation means sequentially avoiding and minimizing impacts to the extent practicable, and then compensating for remaining unavoidable impacts of a proposed action" (9 VAC 25-210-10). According to State Water Control Law § 62.1-44.15:5D, "...except in compliance with an individual or general Virginia Water Protection Permit issued in accordance with this subsection, it shall also be unlawful to conduct the following activities in a wetland: (i) new activities to cause draining that significantly alters or degrades existing wetland acreage or functions, (ii) filling or dumping, (iii) permanent flooding or impounding, or (iv) new activities that cause significant alteration or degradation of existing wetland acreage or functions. Permits shall address

avoidance and minimization of wetland impacts to the maximum extent practicable. A permit shall be issued only if the Board finds that the effect of the impact, together with other existing or proposed impacts to wetlands, will not cause or contribute to a significant impairment of state waters or fish and wildlife resources."

Federal wetlands mitigation policy is guided by a Memorandum of Agreement between the U.S. Army Corps of Engineers (Corps) and the U.S. Environmental Protection Agency that clarify a three-step approach to avoiding, minimizing, and compensating for unavoidable impacts (see Clean Water Act Section 404 (b)(1) *Guidelines Mitigation Memorandum of Agreement*, February 1990). The Corps first makes a determination that potential impacts have been avoided to the maximum extent practicable; remaining unavoidable impacts will then be mitigated to the extent appropriate and practicable by requiring steps to minimize impacts and, finally, compensate for aquatic resource values. This sequence is considered satisfied where the proposed mitigation is in accordance with specific provisions of a Corps and EPA approved comprehensive plan that ensures compliance with the compensation requirements of the 404(b)(1) Guidelines (examples of such comprehensive plans may include Special Area Management Plans, Advance Identification areas (Section 230.80), and State Coastal Zone Management Plans).

Therefore, to be consistent with state and federal wetlands policy and the Wetlands Management Policy of the VCP, DEQ encourages the Air Force to consider the alternative site for this project that would reduce or eliminate the destruction of wetlands.

2. Erosion and Sediment Control and Stormwater Management. As described in the EA (page 4-11), erosion and sediment control measures would be implemented in accordance with the *Virginia Erosion and Sediment Control Handbook*. The Air Force states that since more than 1 acre would be disturbed by development at any of the proposed sites, a Virginia Pollutant Discharge Elimination System (VPDES) Stormwater General Permit would be required.

The Department of Conservation and Recreation (DCR) did not respond to our request for comments on this proposed action. However, according to DCR guidance, federal agencies and their authorized agents conducting regulated land-disturbing activities on private and public lands in the state must comply with the Virginia Erosion and Sediment Control Law and Regulations (VESCL&R), Virginia Stormwater Management Law and Regulations (VSWML&R), and other applicable federal nonpoint source pollution mandates (e.g. Clean Water Act Section 313, Federal Consistency under the Coastal Zone Management Act). Clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, or other structures, soil/dredge spoil areas, or related land conversion activities that disturb 10,000 square feet or more (2,500 square feet or more in a Chesapeake Bay Preservation Area) would be regulated by VESCL&R and those that disturb one acre or greater would be covered by VSWML&R.

Accordingly, the Air Force should prepare and implement erosion and sediment control (ESC) and stormwater management (SWM) plans to ensure compliance with state law. The federal agency is ultimately responsible for achieving project compliance through oversight of on-site contractors, regular field inspection, prompt action against non-compliant sites, and/or other mechanisms, consistent with agency policy.

Furthermore, effective 29 January 2005, House Bill 1177 transferred regulatory authority of the Virginia Pollutant Discharge Elimination System (VPDES) programs related to municipal separate storm sewer systems (MS4s) and construction activities from State Water Control Board to the Soil and Water Conservation Board and transferred oversight of these programs from DEQ to the Virginia Department of Conservation and Recreation (DCR). As such, DCR is responsible for the issuance, denial, revocation, termination and enforcement of VPDES permits for the control of stormwater discharges from MS4s and land disturbing activities under the Virginia Stormwater Management Program. DEQ will continue to manage the remaining VPDES program. Therefore, for any land disturbing activities equal to one acre or more, the Air Force is required to apply to DCR for registration coverage under the General Permit for Discharges of Stormwater from Construction Activities. Specific questions regarding the Stormwater Management Program requirements should be directed to Mr. Eric Capps, DCR, at (804) 786-3957, e-mail eric.capps@dcr.virginia.gov.

3. *Chesapeake Bay Preservation Areas*. DCR's Division of Chesapeake Bay Local Assistance (DCBLA) notes that pursuant to the Coastal Zone Management Act (CZMA) of 1972, as amended, Federal activities affecting Virginia's coastal resources or coastal uses must be consistent with the Virginia Coastal Resources Management Program (VCP)(see section 307(c)(1) of the Act and the *Federal Consistency Regulations*, 15 CFR Part 930, sub-part C). In evaluating the various proposed actions for environmental consequences, the environmental assessment does not address Coastal Lands Management as one of the enforceable regulatory policies of the Virginia Coastal Resources Management Program (VCP).

The Coastal Lands Management program is a state-local cooperative program administered by DCR-DCBLA and 84 localities in Tidewater, Virginia established pursuant to the Chesapeake Bay Preservation Act; Code of Virginia § 10.1-2100 thru § 10.1-2114 and Chesapeake Bay Preservation Area Designation and Management Regulations; Virginia Administrative Code 9 VAC 10-20-10 *et seq.*

While Chesapeake Bay Preservation Areas are not locally designated on federal lands, this does not relieve the Air Force of its responsibilities to be consistent with the provisions of the Chesapeake Bay Preservation Area Designation and Management Regulations (Regulations), as one of the enforceable policies of the VCP. Federal actions on installations located within Tidewater Virginia are required to be consistent with the performance criteria of the Regulations on lands analogous to locally designated Chesapeake Bay Preservation Areas.

In Hampton, the areas protected by the Chesapeake Bay Act, as locally implemented requiring stringent performance criteria, include: tidal wetlands, non-tidal wetlands connected by surface flow and contiguous to tidal wetlands or tributary streams, tidal shores and a 100-foot vegetated buffer area located adjacent to and landward of the aforementioned features, and along both sides of any water body with perennial flow. Less stringent performance criteria apply to land that is contiguous to the 100-foot buffer for a distance of 100 feet in the landward direction.

Three of the proposed sites appear to have lands requiring the less stringent performance criteria. Those are the War Reserve Material Group (WRM) and Air Command Regional Supply (ACCRSS) Parking Area (Figure 2-6); the Visitors' Quarters Construction Area (Figure 2-4); and the Government Fuel Station Proposed Action Site Area (Figure 2-1). To be consistent these projects must comply with the general performance criteria, found in the Chesapeake Bay Preservation Area Designation and Management Regulations; Virginia Administrative Code §9 VAC 10-20-120, including minimizing land disturbance, preserving indigenous vegetation, and minimizing impervious surfaces.

For land disturbance activities over 2,500 square feet, the project must comply with the requirements of the *Virginia Erosion & Sediment Control Handbook*, Third Edition, 1992. In addition, stormwater management criteria consistent with water quality protection provisions (§4 VAC 3-20-71 et seq.) of the *Virginia Stormwater Management Regulations* (§ 4 VAC 3-20) shall be satisfied.

However, the Visitors' Quarters Construction and the WRM & ACCRSS Parking Area sites also appear to have areas requiring the more stringent performance criteria. If activity is proposed for these areas analogous to the Resource Protection Areas (RPAs) they must comply with the criteria set forth in §9 VAC 10-20-130. The WRM & ACCRSS Parking Area site (Figure 2-6) would not be consistent with these requirements. As the impact these projects would have on Coastal Lands Management was not discussed in the environmental assessment, alternatives were not presented or evaluated.

Provided adherence with the Erosion and Sediment Control Law (§ 10.1-560 et seq. of the Code of Virginia), the Virginia Stormwater Management Act (§ 10.1-603.1 et seq. of the Code of Virginia) and the general performance criteria (§9 VAC 10-20-120 et seq.), the following will be consistent with the *Chesapeake Bay Preservation Area Designation and Management Regulations*:

- Government Fuel Station Relocation
- Alert Area Expansion
- Explosive Ordnance Disposal (EOD) Training Range Relocation

With the adherence to the above requirements, plus adherence to the more stringent criteria found in §9 VAC 10-20-130, the Visitors' Quarters Construction would be consistent.

The WRM & ACCRSS Parking Area proposes construction in the areas analogous to the RPAs requiring stringent performance criteria. As proposed this is not consistent with the *Chesapeake Bay Preservation Area Designation and Management Regulations*. The drawings provided are not complete. However, Figure 2-6 shows a substantial amount of open land outside of the RPA that might accommodate a parking lot. Alternatives should be evaluated and an analysis provided before this particular proposed action would be found consistent.

4. Air Pollution Control. According to the EA (page 4-12) emissions from the proposed actions are either "presumed to conform" (based on emissions levels that are considered insignificant in the context of overall regional emissions) or they must demonstrate conformity with approved State Implementation Plan (SIP) provisions. The EA determined (page 4-14) that proposed WINDO projects would not conflict with the air pollution control objectives associated with the Virginia Coastal Resources Management Program (VCP). The EA (page 4-14) found that emission increases of O₃ precursors (NO_x and VOCs) are well below the threshold thus demonstrating compliance with the Clean Air Act (CAA) conformity requirements.

According to DEQ's Division of Air Program Coordination, the project site is in an ozone (O₃) non-attainment area and an emission control area for the contributors to ozone pollution, which are volatile organic compounds (VOCs) and oxides of nitrogen (NO_x). This has two practical consequences for project development. One is that the Air Force should take all reasonable precautions to limit emissions of VOCs and NO_x, principally by controlling or limiting the burning of fossil fuels. A second precaution, stemming from 9 VAC 5-40-5490 in the Regulations for the Control and Abatement of Air Pollution, is that there are some limitations on the use of "cut-back" (liquefied asphalt cement, blended with petroleum solvents) that may apply in the construction of roads and parking areas associated with the project. The asphalt must be "emulsified" (predominantly cement and water with a small amount of emulsifying agent) except when specified circumstances apply. Moreover, there are time-of-year restrictions on its use during the months of April through October in VOC emission control areas.

DEQ's Division of Air Program Coordination states that during construction, fugitive dust must be kept to a minimum by using control methods outlined in 9 VAC 5-50-60 et seq. of the Regulations for the Control and Abatement of Air Pollution. These precautions include, but are not limited to, the following:

- Use, where possible, of water or chemicals for dust control;
- Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials;

- Covering of open equipment for conveying materials; and
- Prompt removal of spilled or tracked dirt or other materials from paved streets and removal of dried sediments resulting from soil erosion.

If project activities include the burning of construction or demolition material, this activity must meet the requirements under 9 VAC 5-40-5600 et seq. of the Regulations for open burning, and it may require a permit. The Regulations provide for, but do not require, the local adoption of a model ordinance concerning open burning. The Air Force should contact the City of Hampton officials to determine what local requirements, if any, exist.

5. Solid and Hazardous Wastes and Hazardous Materials. The EA (page 4-15) states that all hazardous materials and construction/demolition debris generated by the proposed actions would be handled, stored and disposed of in accordance with federal, state and local regulations and laws.

DEQ found that both solid and hazardous waste issues were addressed adequately in the report. However, the report did not include a search of waste-related data bases. The Waste Division staff performed a cursory review of its data files and determined that the facility is under DEQ's Federal Facilities Installation Restoration Program (VA2800005033), a Formerly Used Defense Site (VA9799F1590), and a RCRA small quantity generator of hazardous waste (VAD988222527). The following websites may prove helpful in locating additional information for these identification numbers:

- http://www.epa.gov/echo/search_by_permit.html
- http://www.epa.gov/enviro/html/rcris/rcris_query_java.html.

The report correctly identifies the active and closed Environmental Restoration Program (ERP) sites on or adjacent to the proposed construction sites and the alternative construction sites. One additional ERP site that was not identified in the report is Site OT-64, Basewide Groundwater and represents the groundwater component associated with every ERP site on base. Due to the dynamic nature of groundwater, it is possible that contaminated groundwater associated with an ERP site may have migrated beneath an adjacent proposed construction site.

For more information concerning Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) obligations at OT-64 and the other active and closed ERP sites that may be impacted by the proposed construction activity, the Federal Facilities Restoration Program recommends the facility contact Mr. John Tice, LAFB Environmental Restoration at (757) 764-1082, prior to initiating any land, sediment, or groundwater disturbing activities.

The report noted that the Explosives Ordnance Detonation (EOD) is to be relocated to another area of the facility. At both this and other locations discussed in the report, any

soil that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. Some of the applicable state laws and regulations are: Virginia Waste Management Act, Code of Virginia Section 10.1-1400 *et seq.*; Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60); Virginia Solid Waste Management Regulations (VSWMR) (9VAC 20-80); Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20-110). Some of the applicable Federal laws and regulations are: the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901 *et seq.*, and the applicable regulations contained in Title 40 of the Code of Federal Regulations; and the U.S. Department of Transportation Rules for Transportation of Hazardous materials, 49 CFR Part 107.

Also, all structures being demolished/renovated/ removed should be checked for asbestos-containing materials (ACM) and lead-based paint prior to demolition. If ACM or LBP are found, in addition to the federal waste-related regulations mentioned above, State regulations 9VAC 20-80-640 for ACM and 9VAC 20-60-261 for LBP must be followed.

Due to the large number of demolition and construction projects occurring at Langley, DEQ has received reports of numerous demolition debris waste piles being operated on the base. Please note that the Virginia Solid Waste Management Regulations (VSWMR) (9VAC 20-80) requires a facility to obtain a permit to operate waste piles. An inspection of the facility by DEQ has been scheduled to ascertain if the allegation is true. A permit would not be required if demolition waste is accumulated in an appropriate container and is disposed every 90 days.

Langley is considered the generator of the solid and hazardous waste at these demolition and construction sites. The liability and responsibility to insure that all waste generated on the base is properly characterized and managed cannot be delegated to a contractor.

Please note that DEQ encourages all construction projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. All generation of hazardous wastes should be minimized and handled appropriately. For more information contact Harold Winer, DEQ-Tidewater Regional Office, (757) 518-2153.

6. Petroleum Storage Tanks. DEQ determined that the addition of a new aboveground storage tank (AST) associated with the relocation of the Government Fuel Station will require proper registration (form 7540-AST) by the Air Force. The Air Force is also required to notify DEQ of the relocation of additional regulated ASTs (i.e. greater than 660 gallons) as part of this project. Also, due to the classification of Langley AFB as a "greater than one million gallon AST storage facility," the installation and operation of ASTs at the new fuel site must meet the requirements of Virginia AST Regulation 9

VAC 25-91-130 (A). After this project is complete, Langley AFB must update the current Oil Discharge Contingency Plan and Integrated Contingency Plan (ODCP/ICP) to reflect any changes in tanks, piping, and spill containment.

The removal of any regulated underground storage tanks (USTs) related to the proposed Alert Area Expansion must be conducted in accordance with Virginia UST Technical Regulation 9 VAC 25-580-320, 330 and 350. The addition or installation of any new UST or AST must be reported to DEQ (form 7530-UST and/or 7540-AST). DEQ must also be notified of the use of portable "bladder" tanks for fuel storage as part of this project. These tanks are considered regulated ASTs if greater than 660 gallons and are also subject to the requirements of 9 VAC 25-91-130 (A).

DEQ maintains petroleum contaminant release information in its files for the Alert Hanger (PC 98-2340) where the Alert Area Expansion is proposed. That case was closed on December 6, 1999. The other areas (Government Fuel Station Relocation Proposed Action Site and Alternative Site, Visitors' Quarters Construction, EOD Training Range, and the WRM and ACCRSS) do not appear to have petroleum cases (PCs) associated with them. However, due to the absence of detailed road maps in its files for portions of LAFB, DEQ recommends that the Air Force perform a review of its environmental files as well as DEQ's PC files before projects are initiated. If previous, known releases are located in the areas of proposed construction, the Air Force should be prepared to properly characterize and dispose of any contaminated soils or ground water in accordance with state regulations. If evidence of a new petroleum release is discovered during actual construction, it must be reported to the DEQ within 24 hours (if not associated with a regulated UST) or immediately if the release is from an AST, heating oil UST, or unknown source.

7. Pesticides and Herbicides. The use of herbicides or pesticides for landscape maintenance should be in accordance with the principles of integrated pest management. The least toxic pesticides that are effective in controlling the target species should be used. Also, we recommend that the use of pesticides or herbicides containing volatile organic compounds as their active ingredient be avoided to the maximum extent practicable in order to protect air quality. Otherwise, the use of these pesticides or herbicides should be applied outside of the ozone season. Please contact the Department of Agriculture and Consumer Services at (804) 786-3501 for more information.

8. Natural Heritage Resources. The EA (page 4-8) states that under the proposed actions, demolition and construction would disturb areas that were previously developed, have currently experienced high levels of continual human activity, lack native terrestrial habitat, and exhibit a low level of biodiversity. The Air Force anticipates that the only plant or animal species likely to be displaced are individuals of common and locally abundant species.

The Department of Conservation and Recreation (DCR) did not respond to our request for comments on the project. DCR strives to preserve and protect the environment of the Commonwealth of Virginia and advocate the wise use of its scenic, cultural, recreation and natural heritage resources. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, state unique or exemplary natural communities, significant geologic formations and similar features of scientific interest. DCR's Division of Natural Heritage (DNH) can search its Biotics Data System for occurrences of natural heritage resources in and around the project site.

Furthermore, the Virginia Department of Agriculture and Consumer Services (VDACS), which has regulatory authority to conserve rare and endangered plant and insect species through the Virginia Endangered Plant and Insect Species Act, has established a Memorandum of Agreement with DCR. Under this Agreement DCR-DNH, in consultation with VDACS, represents VDACS in its comments and recommendations regarding the potential impact of reviewed projects or activities on state-listed plant and insect species. Although DCR did not respond, VDACS reviewed the EA prepared for the proposed action and determined that no additional comments are necessary in reference to endangered plant and insect species.

Any absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. Since new and updated information is continually added to Biotics, DEQ recommends that DCR-DNH be contacted at (804) 786-7951, to secure information on natural heritage resources before the project is implemented.

9. Wildlife Resources. According to the EA (page 3-13), twenty special status species have the potential to occur at Langley AFB; fifteen have special state status and thirteen have federal status. The document did not identify any critical habitat on base.

The Department of Game and Inland Fisheries (DGIF) was contacted for information used in the development of the EA. After review of the document, DGIF does not anticipate a significant adverse impact upon endangered or threatened wildlife resources under its jurisdiction to occur due to this project.

Furthermore, DGIF believes this project is consistent with the fisheries management enforceable policy of the Virginia Coastal Resources Management Program.

10. Geologic Resources. The Department of Mines, Minerals, and Energy (DMME) did not indicate that project activities would have a significant impact on geology or mineral resources. For more information, contact Gerald Wilkes, (434) 951-6364.

11. Transportation Impacts. The Virginia Department of Transportation (VDOT) determined that the proposed action would not adversely impact the existing or future transportation system or any transportation improvement projects in the six year plan or

in the 2021 Long Range Plan. VDOT recommends that the project be coordinated with the Norfolk Residency to ensure that all current VDOT standards are met. For additional information and coordination, contact Marlee Parker, VDOT, (804) 786-9683.

12. Historic Structures and Archaeological Resources. The EA (page 4-6) determined that impacts to historic properties could occur as a result of Alert Area Expansion project. The Alert Hangar is an eligible structure for listing in the National Register of Historic Places (NRHP). The Air Force and Virginia Historic Preservation Office (SHPO) have executed a Memorandum of Agreement (MOA) regarding the hangar. The EA (page 4-7) states that impacts to cultural resources could occur as a result of the project to construct the WRM and ACCRSS parking area.

The Air Force must ensure that the proposed activity complies with *§106 of the National Historic and Preservation Act of 1966*, as amended, and its implementing regulation 36 CFR 800. *Section 106* requires that federal agencies must consider effects to properties that are listed or eligible for listing on the National Register of Historic Places. The Department of Historic Resources (DHR) conducts reviews of projects to determine their effect on historic structures or cultural resources. The Air Force should consult directly with DHR to ensure compliance with *Section 106*. For coordination, contact Ms. Ethel Eaton, DHR, at (804) 367-2323.

13. Pollution Prevention. DEQ advocates that principles of pollution prevention be used in all construction projects as well as in facility operations. Effective siting, planning, and on-site Best Management Practices (BMPs) will help to ensure that environmental impacts are minimized. However, pollution prevention techniques also include decisions related to construction materials, design, and operational procedures that will facilitate the reduction of wastes at the source. We have several pollution prevention recommendations that may be helpful in constructing or operating this project:

- Consider environmental attributes when purchasing materials. For example, the extent of recycled material content, toxicity level, and amount of packaging should be considered and can be specified in purchasing contracts.
- Consider contractors' commitment to the environment when choosing contractors. Specifications regarding raw materials and construction practices can be included in contract documents and requests for proposals.
- Choose sustainable materials and practices for infrastructure and building construction and design. These could include asphalt and concrete containing recycled materials, and integrated pest management in landscaping, among other things.

DEQ's Office of Pollution Prevention provides free information and technical assistance relating to pollution prevention techniques. For more information, contact DEQ's Office of Pollution Prevention, Mr. Tom Griffin at (804) 698-4545.

14. Energy Conservation. DEQ recommends that new building be designed to comply with state and federal guidelines and industry standards for energy conservation and efficiency. For example, energy efficiency of the terminal can be enhanced by maximizing the use of the following:

- Thermally efficient building shell components (roof, wall, floor, and insulation);
- High efficiency heating, ventilation, air conditioning systems;
- High efficiency lighting systems; and
- energy-efficient office and data processing equipment.

The Department of Mines, Minerals and Energy should be contacted, Gerald Wilkes (434) 951-6364.

15. Local Comments. The City of Hampton reviewed the project and found that the proposed projects do not appear to impact the site significantly with respect to any identified environmental, cultural and community resources. In addition, the project does not appear to conflict with the City's current plans or policies. Furthermore, the City commends the Air Force on its decision to utilize architectural design standards in accordance with the Leadership in Energy and Environmental Design (LEED) Green Building Rating System. For any additional information, contact James Freas, City of Hampton, at (757) 728-5233.

16. Regional Comments. The Hampton Roads Planning District Commission (HRPDC) reviewed the EA and contacted the City of Hampton regarding the project. HRPDC notes that, based on the EA, two of the five proposed projects will impact wetlands and potential habitat areas to some degree, but the document does not provide adequate detail to fully assess the effects of the proposed encroachments.

The proposed construction of the WRM Group and ACCRSS parking area appears to be located partially within an area of wetlands and the adjacent buffer. The square footage of the proposed parking area is not given and no details regarding on-site stormwater management are provided. In addition, the map provided does not include adequate information regarding the location and configuration of the proposed parking area. HRPDC found that the area could be reconfigured to reduce the impact on wetlands. HRPDC encourages the Air Force to provide a more detailed site assessment to determine the impact of this project and to identify possible alternatives that would mitigate that impact.

The EA also identifies endangered and threatened species known to occur in the area of the base, but provides no site-specific assessments. Of particular concern is the impact of noise from the proposed EOD relocation site, which is surrounded by wetlands. The federally listed threatened species bald eagle is known to occur in the northern area of the base and is known to be sensitive to noise, but the most recent

information provided is from surveys conducted in 1993 and 1994. HRPDC encourages the Air Force to provide current site assessment information to allow for a more thorough review of the project's effects on endangered and threatened species. Questions or comments may be directed to Arthur Collins, HRPDC, at (757) 420-8300.

Federal Consistency under the Coastal Zone Management Act

Pursuant to the Coastal Zone Management Act of 1972, as amended, federal activities located inside or outside of Virginia's designated coastal management area that can have reasonably foreseeable effects on coastal resources or coastal uses must, to the maximum extent practicable, be implemented in a manner consistent with the Virginia Coastal Resources Management Program (VCP). The VCP consists of a network of programs administered by several agencies. The DEQ coordinates the review of federal consistency determinations with agencies administering the Enforceable and Advisory Policies of the VCP.

DEQ's Finding on the Federal Consistency Determination

Based on the information provided in the EA and consistency determination and the comments of reviewing agencies, DEQ is unable to complete its review of the consistency determination at this time due to the absence of required information. The content of a consistency determination is described in 15 CFR §930.39. In accordance with 15 CFR §930.41(a), our 60-day review of the consistency determination expires on June 17, 2005. This response pertains to the consistency determination contained in the EA.

Analysis of Objection

Pursuant to 15 C.F.R. 930.41 and 930.43(b), the Commonwealth objects to the Air Force's consistency determination for this project on the grounds that there is insufficient information to determine project consistency with the Coastal Lands Management Policy of the VCP (Code of Virginia §10.1-2100 -10.1-2114).

After reviewing the EA and consistency determination, DCR's Division of Chesapeake Bay Local Assistance (DCR-DCBLA) finds that, as currently proposed, the Visitor's Quarters Construction area and the War Reserve Material Group and Air Command Regional Supply (WRM & ACCRSS) Parking Area sites are not consistent with the *Chesapeake Bay Preservation Area Designation and Management Regulations*, and therefore the Coastal Lands Management policy of the VCP.

The Visitors' Quarters Construction and WRM & ACCRSS Parking Area sites appear to have areas requiring the more stringent performance criteria. If activity is proposed for these areas analogous to the Resource Protection Areas (RPAs) they must comply with the criteria set forth in §9 VAC 10-20-130. The impact these projects would have on

Coastal Lands Management was not discussed in the environmental assessment and alternatives were not presented or evaluated.

The WRM & ACCRSS Parking Area proposes construction in areas analogous to the RPAs requiring stringent performance criteria. As proposed this is not consistent with the *Chesapeake Bay Preservation Area Designation and Management Regulations*. The drawings provided are not complete. However, Figure 2-6 shows a substantial amount of open land outside of the RPA that might accommodate a parking lot. Alternatives should be evaluated and an analysis provided before this particular proposed action would be found consistent.

Furthermore, the Hampton Roads Planning District Commission (HRPDC) stated that the proposed construction of the WRM Group and ACCRSS Parking Area appears to be located partially within an area of wetlands and the adjacent buffer. The square footage of the proposed parking area is not given and no details regarding on-site stormwater management are provided. In addition, the map provided does not include adequate information regarding the location and configuration of the proposed parking area. HRPDC found that the area could be reconfigured to reduce the impact on wetlands.

DEQ encourages the Air Force to work with the DCR Division of Chesapeake Bay Local Assistance and provide the information needed to determine project consistency with the Coastal Lands Management policy of the VCP. To coordinate the exchange of the required information, contact Alice Baird, DCR-DCBLA at (804) 225-2307. The required information may be provided within the Final Environmental Assessment or separately. Upon receipt of the requested information, DEQ will complete our review of the Federal Consistency Determination.

Regulatory and Coordination Needs

1. Water Quality and Wetlands. Any future project impacts to surface water and wetlands may require a Virginia Water Protection (VWP) permit issued through DEQ's Tidewater Regional Office and a § 404 Clean Water Act permit issued by the U.S. Army Corps of Engineers (Corps). Required permitting may be accomplished through the submission of a Joint Permit Application (JPA) to the VMRC. If necessary, the Air Force may coordinate this activity with Harold Winer, DEQ-TRO, at (757) 518-2153.

2. Erosion and Sediment Control and Stormwater Management. The Air Force must ensure that it is in compliance with Virginia's Erosion and Sediment Control Law (Virginia Code 10.1-567) and regulations (4 VAC 50-30-30 et seq.) and Stormwater Management Law (Virginia Code 10.1-603.5) and regulations (4 VAC 3-20-210 et seq.). Activities that disturb 10,000 square feet or more of land (2,500 square feet in a Chesapeake Bay Preservation Area) would be regulated by VESCL&R and those that disturb one acre or greater would be covered by VSWML&R. The Air Force is

encouraged to contact DCR's Chowan, Albermarle and Coastal Watersheds Office, (757) 925-2468, for assistance with developing or implementing E&S and/or Stormwater Management Plans to ensure project conformance during and after active demolition.

For land disturbing activities equal to one acre or more, the Air Force is required to apply to DCR for registration coverage under the VPDES General Permit for Discharges of Stormwater from Construction Activities. Specific questions regarding the Stormwater Management Program requirements should be directed to Mr. Eric Capps, DCR, at (804) 786-3957, e-mail eric.capps@dcr.virginia.gov.

3. Coastal Lands Management. In order to meet its obligations with regard to federal consistency under the Coastal Zone Management Act, the Air Force must coordinate project activities with DCR-DCBLA to ensure project consistency with the Chesapeake Bay Preservation Act and coastal lands management enforceable policy of the VCP. The Air Force should contact Alice Baird, DCR-CBLA, at (804) 225-2307, to coordinate this action.

4. Air Quality Regulations. This project may be subject to air regulations administered by the Department of Environmental Quality. Regulatory requirements that may apply to project activities relate to the control of fugitive dust emissions and open burning. Fugitive dust must be kept to a minimum by using control methods outlined in 9 VAC 5-50-60 et seq. of the Regulations for the Control and Abatement of Air Pollution. If project activities include the burning of construction or demolition material, either on or off site, this activity must meet the requirements under 9 VAC 5-40-5600 et seq. Whereas, the regulation provides for, but does not require, the local adoption of a model ordinance concerning open burning, the Air Force should contact City of Hampton officials to determine what local requirements, if any, exist. For more information contact Harold Winer, DEQ-Tidewater Regional Office, (757) 518-2153.

5. Solid and Hazardous Wastes. All solid waste, hazardous waste, and hazardous materials must be managed in accordance with all applicable federal, state, and local environmental regulations. Contact DEQ's Tidewater Regional Office at (757) 518-2000, concerning location and availability of suitable waste management facilities in the project area or if free product, discolored soils, or other evidence of contaminated soils are encountered.

- **Asbestos Materials.** It is the responsibility of the owner or operator of a demolition activity, prior to the commencement of the demolition, to thoroughly inspect the affected part of the facility where the demolition or renovation operation will occur for the presence of asbestos, including Category I and Category II nonfriable asbestos containing material (ACM). Upon classification as friable or non-friable, all waste ACM shall be disposed of in accordance with the Virginia Solid Waste Management Regulations (9 VAC 20-80-640), and

transported in accordance with the Virginia regulations governing Transportation of Hazardous Materials (9 VAC 20-110-10 et seq.). Contact the DEQ Waste Management Program for additional information, (804) 698-4021, and the Department of Labor and Industry, Dr. Clarence H. Wheeling at (804) 786-0574.

- *Lead-Based Paint.* If applicable, the proposed project must comply with the U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) regulations, and with the Virginia Lead-Based Paint Activities Rules and Regulations. For additional information regarding these requirements contact the Department of Professional and Occupational Regulation, Mr. Thomas Perry at (804) 367-8595.

6. Petroleum Storage Tanks. The Air Force must register new ASTs and USTs associated with this proposed action with DEQ. The removal of USTs must be conducted in accordance with Virginia UST Technical Regulation. The Air Force must characterize and dispose of any contaminated soils or groundwater in accordance with state regulations. For additional information and coordination, contact Harold Winer, DEQ Tidewater Regional Office, at (757) 518-2153.

7. Natural Heritage Resources. This project should be coordinated with DCR's Division of Natural Heritage to determine any possible project impacts on natural heritage resources. Please contact, J. Christopher Ludwig, Natural Heritage Inventory Manager, at (804) 371-6206.

8. Historic Resources. To ensure compliance with *Section 106 of the National Historic and Preservation Act of 1966*, the Air Force must coordinate project activities with the Virginia Department of Historic Resources. Please contact Ethel Eaton, DHR, at (804) 367-2323.

Thank you for the opportunity to review the draft Environmental Assessment for this undertaking. Detailed comments of reviewing agencies are attached for your review. Please contact me at (804) 698-4325 or John Fisher at (804) 698-4339 for clarification of these comments.

Sincerely,

A handwritten signature in cursive script, appearing to read "Ellie Irons".

Ellie Irons, Program Manager
Office of Environmental Impact Review

Enclosures

Mr. Matt Goss
Page 18

cc: Kotur S. Narasimhan, DEQ-ADA
Allen Brockman, DEQ-ORP
Harold Winer, DEQ-TRO
Tony Watkinson, VMRC
Gerald P. Wilkes, DMME
Andrew Zadnick, DGIF
Scott Crafton, DCR
Keith R. Tignor, VDACS
Marlee Parker, VDOT
Alan Weber, VDH
Ethel Eaton, DHR
George Wallace, City of Hampton
Arthur L. Collins, Hampton Roads PDC

If you cannot meet the deadline, please notify JOHN FISHER at 804/698-4339 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

REVIEW INSTRUCTIONS:

- A. Please review the document carefully. If the proposal has been reviewed earlier (i.e. if the document is a federal Final EIS or a state supplement), please consider whether your earlier comments have been adequately addressed.
- B. Prepare your agency's comments in a form which would be acceptable for responding directly to a project proponent agency.
- C. Use your agency stationery or the space below for your comments. IF YOU USE THE SPACE BELOW, THE FORM MUST BE SIGNED AND DATED.

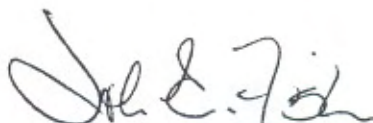
Please return your comments to:

MR. JOHN E. FISHER
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL IMPACT REVIEW
629 EAST MAIN STREET, SIXTH FLOOR
RICHMOND, VA 23219
FAX #804/698-4319

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MAY 06 2005

DEQ-Office of Environmental
Impact Review



JOHN E. FISHER
ENVIRONMENTAL PROGRAM PLANNER

COMMENTS

The Marine Resources Commission, pursuant to Chapter 12 of Title 28.2 of the Code of Virginia, is responsible for issuing permits for encroachments in, on, or over State-owned submerged lands throughout the Commonwealth. All encroachments channelward of mean low water will require authorization from this agency. From the information included with the document, it does not appear that the proposal includes impacts within this agency's jurisdiction.

(signed) Tyler Allen West (date) 5/5/05
(title) Env't Eng Sr
(agency) UMRC

From: Parolari,Bert
Sent: Wednesday, May 18, 2005 1:00 PM
To: Winer,Harold; Fisher,John
Cc: Borton,David; Johnston,Milton
Subject: RE: (CORRECTED VERSION) EIR #05-118F, Wing Infrastructure Development Outlook (WINDO)

Importance: High

John – per our discussion of this morning concerning this EIR, I noticed a few typos in the VWP section that I did not correct before sending them to Harold and his subsequent submittal to you. I have corrected them in the text that follows. Sorry for the errors.

Bert W. Parolari, Jr.
Virginia Water Protection Permit Manager
5636 Southern Blvd.
Virginia Beach, VA 23462
(757) 518-2166 (Voice)
(757) 518-2103 (Fax)
bwparolari@deq.virginia.gov

-----Original Message-----

From: Winer,Harold
Sent: Tuesday, May 17, 2005 12:41 PM
To: Fisher,John
Cc: Parolari,Bert; Borton,David; Johnston,Milton
Subject: (CORRECTED VERSION) EIR #05-118F, Wing Infrastructure Development Outlook (WINDO)

As requested, TRO staff has reviewed the supplied information and has the following comments:

Regarding VWP issues, we note that the proposed project will clearly involve impacts to surface waters, including wetlands. As such, a Joint Permit Application documenting that impacts to these areas have been avoided and minimized to the maximum extent practicable should be prepared and submitted to DEQ and other state/local regulatory bodies for review and authorization prior to commencing work. Based on the very limited level of detail associated with this document, it appears that some proposed impacts to surface waters including wetlands may be avoidable. Until additional information is available in the context of a Joint Permit Application, the need for revisions to the proposed actions can not be assessed further. While this report clearly recognizes the need to obtain Federal, State and Local government permits, several technical errors exist in these discussions.

Specifically, Section 2.5.3 - Paragraph 2 limits the need to submit a Joint Permit Application to "...jurisdictional wetlands or waters of the U.S. (33 CFR Part 328)..." While this federal regulatory citation is clearly applicable to the federal permitting process in that it defines "Waters of the United States", it has little, if any bearing on DEQ's regulatory authority. Under Virginia Law, there is no need to find that a water or wetland meets the definition of "Waters of the United States" for those waters or wetlands to be regulated. In fact, Virginia has independent regulatory authority over these areas that clearly exceed that contained in the Clean Water Act. We suggest that references to "jurisdictional wetlands or waters of the U.S" be corrected to read "waters or wetlands regulated by State and/or Federal law and regulation."

Similarly, Section 2-5-3 - Paragraph 3 appears to suggest that only the "relocation of any existing stormwater infrastructure would be addressed through the Virginia Water Protection Permit program

administered by Commonwealth of Virginia, VDEQ (V.A.C., 62.1-44.15.5)". This "regulatory" citation is incorrect. The referenced section does not exist in Virginia Administrative Code (regulation) or the Code of Virginia (law) and should be corrected. The proper Code section is "Virginia Code § 62.1-44.15:5". The regulation promulgated under Virginia law should be cited as "9VAC25-210-10 et seq." Again, these regulatory requirements are significantly more encompassing than represented in this document.

Concerning Tank/Remediation concerns:

Petroleum Storage Tank Inspections/Compliance: Two areas of concern for the UST / AST compliance program are (1) "Relocation of the Government Fuel Station and (2) Alert Area Expansion".

1. With respect to the relocation of the Government Fuel Station, the addition of a new AST at the proposed site will require proper registration (form 7540-AST) by the Owner/Operator. Notification to DEQ of the relocation of additional regulated ASTs (i.e. greater than 660 gallons) as part of this project is also necessary. Also, due to the classification of Langley AFB as a "greater than one million gallon AST storage facility", the installation and operation of ASTs at the new fuel site must meet the requirements of Virginia AST Regulation 9 VAC 25-91-130 (A). Lastly, once this project is complete, Langley AFB must update the current ODCP / ICP (Oil Discharge Contingency Plan and Integrated Contingency Plan) to reflect any changes in tanks, piping, spill containment etc. This update should be addressed to my attention at the Tidewater Regional Office (TRO).

2. With respect to the proposed Alert Area Expansion, the removal of any regulated USTs must be conducted in accordance with Virginia UST Technical Regulation 9 VAC 25-580-320, 330 and 350. The addition / installation of any new UST or AST must be reported to DEQ. (form 7530-UST and/or 7540-AST) DEQ must also be notified about the use of portable "bladder" tanks for fuel storage as part of this project. These tanks are considered regulated ASTs if greater than 660 gallons and are also subject to the requirements of 9 VAC 25-91-130 (A).

Petroleum Storage Tank Remediation: We have petroleum contaminant release information in our files for the Alert Hanger (PC 98-2340) where the Alert Area Expansion is proposed. That case was closed on December 6, 1999. The other areas (Government Fuel Station Relocation Proposed Action Site and Alternative Site, Visitors' Quarters Construction, EOD Training Range, and the WRM and ACCRSS) do not appear to have petroleum PC cases associated with them. However, due to the absence of detailed road maps in our files for portions of LAFB, we recommend that Langley AFB perform a review of their own environmental files as well as our PC files before projects are initiated. If previous, known releases are located in the areas of proposed construction, Langley AFB should be prepared to properly characterize and dispose of any contaminated soils or ground water in accordance with state regulations. If evidence of a new petroleum release is discovered during actual construction, it must be reported to the DEQ within 24 hours (if not associated with a regulated underground storage tank (UST)) or immediately if the release is from an aboveground storage tank (AST), heating oil UST, unknown source, etc.

Regarding Waste issues, all demolition wastes must be characterized prior to disposal at an appropriate facility.

Due to the large number of demolition and construction projects occurring at Langley, we have received reports of numerous demolition debris waste piles being operated on the base. Please note that the VSWMR requires a facility to obtain a permit to operate waste piles. An inspection of the facility is

scheduled for the near future to ascertain if the allegation is true. A permit would not be required if demolition waste is accumulated in an appropriate container and is disposed every 90 days.

Langley is considered the generator of the solid and hazardous waste at these demolition and construction sites. The liability and responsibility to insure that all waste generated on the base is properly characterized and managed cannot be delegated to a contractor.

The report identifies several nearby ERP sites that maybe affected by this project. Please coordinate activities with our DEQ Federal Facilities staff.

Thanks for the opportunity to comment.

Harold J. Winer
Deputy Regional Director
Virginia DEQ, Tidewater Regional Office
Phone: 757-518-2153/Fax: 757-518-2003
Email: hjwiner@deq.virginia.gov

W. Tayloe Murphy, Jr.
Secretary of Natural
Resources



Joseph H. Maroon
Director

COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

203 Governor Street, Suite 302
Richmond, Virginia 23219-2010
Phone: (804) 786-6124 Fax: (804) 786-6141

June 3, 2005

RECEIVED

JUN 17 2005

DEQ-Office of Environmental
Impact Review

Mr. John E. Fisher
Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, Virginia 23219

Re: Wing Infrastructure Development Outlook (WINDO) Plan, Langley Air Force
Base, DEQ# 05-118F
DCR-DCBLA Project # FSPR-USAF-06-05

Dear Mr. Fisher,

We have reviewed the environmental assessment and consistency determination for the Wing Infrastructure Development Outlook (WINDO) Plan at Langley Air Force Base and have the following comments:

Pursuant to the Coastal Zone Management Act of 1972, as amended, Federal activities affecting Virginia's coastal resources or coastal uses must be consistent with the Virginia Coastal Resources Management Program (VCP)(see section 307(c)(1) of the Act and the *Federal Consistency Regulations*, 15 CFR Part 930, sub-part C). In evaluating the various proposed actions for environmental consequences, the environmental assessment does not address Coastal Lands Management as one of the enforceable regulatory programs of the Coastal Zone Management Act and the Virginia Coastal Resources Management Program (VCP).

The Coastal Lands Management program is a state-local cooperative program administered by the Department of Conservation and Recreation's Division of Chesapeake Bay Local Assistance and 84 localities in Tidewater, Virginia established pursuant to the Chesapeake Bay Preservation Act; Code of Virginia § 10.1-2100 thru § 10.1-2114 and Chesapeake Bay Preservation Area Designation and Management Regulations; Virginia Administrative Code 9 VAC 10-20-10 *et seq.*

While Chesapeake Bay Preservation Areas are not locally designated on federal lands, this does not relieve the Air Force of its responsibilities to be consistent with the provisions of the Chesapeake Bay Preservation Area Designation and Management

Regulations (Regulations), as one of the enforceable programs of Virginia's Coastal Resources Management Program (VCRMP). Federal actions on installations located within Tidewater Virginia are required to be consistent with the performance criteria of the Regulations on lands analogous to locally designated Chesapeake Bay Preservation Areas.

In Hampton, the areas protected by the Chesapeake Bay Act, as locally implemented requiring stringent performance criteria, include: tidal wetlands, non-tidal wetlands connected by surface flow and contiguous to tidal wetlands or tributary streams, tidal shores and a 100-foot vegetated buffer area located adjacent to and landward of the aforementioned features, and along both sides of any water body with perennial flow. Less stringent performance criteria apply to land that is contiguous to the 100-foot buffer for a distance of 100 feet in the landward direction.

Three of the proposed action sites appear to have lands requiring the less stringent performance criteria. Those are the War Reserve Material Group (WRM) and Air Command Regional Supply (ACCRSS) Parking Study Area, Figure 2-6; the Visitors' Quarters Construction Study Area, Figure 2-4; and the, Government Fuel Station Proposed Action Site Study Area, Figure 2-1. To be consistent these projects must comply with the general performance criteria, found in the Chesapeake Bay Preservation Area Designation and Management Regulations; Virginia Administrative Code §9 VAC 10-20-120, including minimizing land disturbance, preserving indigenous vegetation, and minimizing impervious surfaces.

For land disturbance activities over 2,500 square feet, the project must comply with the requirements of the *Virginia Erosion & Sediment Control Handbook*, Third Edition, 1992. In addition, stormwater management criteria consistent with water quality protection provisions (§4 VAC 3-20-71 et seq.) of the *Virginia Stormwater Management Regulations* (§ 4 VAC 3-20) shall be satisfied.

The Visitors' Quarters Construction Study Area and the WRM & ACCRSS sites appear to have areas requiring the more stringent performance criteria. If activity is proposed for these areas analogous to the Resource Protection Areas they must comply with the criteria set forth in §9 VAC 10-20-130. The WRM & ACCRSS site (Figure 2-6) would not be consistent with these requirements. As the impact these projects would have on Coastal Lands Management was not discussed in the environmental assessment, alternatives were not presented or evaluated.

Provided adherence with the Erosion and Sediment Control Law (§ 10.1-560 et seq. of the Code of Virginia), the Virginia Stormwater Management Act (§ 10.1-603.1 et seq. of the Code of Virginia) and the general performance criteria (§9 VAC 10-20-120 et seq.), the following will be consistent with the *Chesapeake Bay Preservation Area Designation and Management Regulations*:

- Government Fuel Station Relocation

- Alert Area Expansion

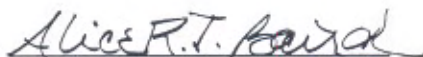
- Explosive Ordnance Disposal (EOD) Training Range Relocation

With the adherence to the above requirements, plus adherence to the more stringent criteria found in §9 VAC 10-20-130, the Visitors' Quarters Construction would be consistent.

The War Reserve Material Group and Air Command Regional Supply Parking Area Study proposes construction in the areas analogous to the Resource Protection Areas requiring stringent performance criteria. As proposed this is not consistent with the *Chesapeake Bay Preservation Area Designation and Management Regulations*. The drawings provided are not complete, however, Figure 2-6 shows a substantial amount of open land outside of the RPA that might accommodate a parking lot. Alternatives should be evaluated and an analysis provided before this particular proposed action would be found consistent.

We appreciate the opportunity to provide comments on this project. Please do not hesitate to contact us at 1-800-CHESBAY should you have any questions.

Sincerely,



Alice R. T. Baird, LA
Chesapeake Bay
Special Projects Coordinator



Brad Belo
Chesapeake Bay
Senior Environmental Planner

DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR PROGRAM COORDINATION

ENVIRONMENTAL REVIEW COMMENTS APPLICABLE TO AIR QUALITY

RECEIVED

TO: John E. Fisher

DEQ - OEIA PROJECT NUMBER: 05 - 118F

PROJECT TYPE: ☐ STATE EA / EIR / FONSI ☒ FEDERAL EA / EIS ☐ SCC

MAY 09 2005

☒ X CONSISTENCY DETERMINATION/CERTIFICATION

DEQ-Office of Environmental
Impact Review

PROJECT TITLE: WING INFRASTRUCTURE DEVELOPMENT OUTLOOK (WINDO) PLAN,
LANGLEY AIR FORCE BASE

PROJECT SPONSOR: DEPARTMENT OF DEFENSE / U. S. AIRFORCE

PROJECT LOCATION: ☒ X OZONE NON ATTAINMENT AREA

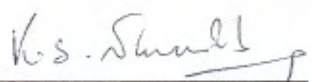
REGULATORY REQUIREMENTS MAY BE APPLICABLE TO: ☒ X CONSTRUCTION
☐ OPERATION

STATE AIR POLLUTION CONTROL BOARD REGULATIONS THAT MAY APPLY:

1. ☐ 9 VAC 5-40-5200 C & 9 VAC 5-40-5220 E – STAGE I
2. ☐ 9 VAC 5-40-5200 C & 9 VAC 5-40-5220 F – STAGE II Vapor Recovery
3. ☐ 9 VAC 5-40-5490 et seq. – Asphalt Paving operations
4. ☒ X 9 VAC 5-40-5600 et seq. – Open Burning
5. ☒ X 9 VAC 5-50-60 et seq. Fugitive Dust Emissions
6. ☐ 9 VAC 5-50-130 et seq. - Odorous Emissions; Applicable to _____
7. ☐ 9 VAC 5-50-160 et seq. – Standards of Performance for Toxic Pollutants
8. ☐ 9 VAC 5-50-400 Subpart _____, Standards of Performance for New Stationary Sources, designates standards of performance for the _____
9. ☐ 9 VAC 5-80-10 et seq. of the regulations – Permits for Stationary Sources
10. ☐ 9 VAC 5-80-1700 et seq. Of the regulations – Major or Modified Sources located in PSD areas. This rule may be applicable to the _____
11. ☐ 9 VAC 5-80-2000 et seq. of the regulations – New and modified sources located in non-attainment areas
12. ☐ 9 VAC 5-80-800 et seq. Of the regulations – Operating Permits and exemptions. This rule may be applicable to _____

COMMENTS SPECIFIC TO THE PROJECT:

Being in an area of ozone non-attainment, all precautions are necessary to restrict the emissions of volatile organic compounds (VOC) and oxides of nitrogen (NOx) during construction.


(Kotur S. Narasimhan)
Office of Air Data Analysis

DATE: May 9, 2005



RECEIVED

MAY 16 2005

DEQ-Office of Environmental
Impact Review

COMMONWEALTH of VIRGINIA

W. Tayloe Murphy, Jr.
Secretary of Natural Resources

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P. O. Box 10009, Richmond, Virginia 23240
Fax (804) 698-4500 TDD (804) 698-4021
www.deq.virginia.gov

Robert G. Burnley
Director

(804) 698-4000
1-800-592-5482

MEMORANDUM

TO: John E. Fisher, Environmental Program Planner

FROM: *ARB* Allen Brockman, Waste Division Environmental Review Coordinator

DATE: May 16, 2005

COPIES: Sanjay Thirunagari, Waste Division Environmental Review Manager; Paul Herman, file

SUBJECT: Environmental Assessment
DOD/Air Force—Langley Air Force Base, Wing Infrastructure Development
Outlook (WINDO) Plan, DEQ Project #05-118F

The Waste Division has completed its review of the Environmental Impact report for the Wing Infrastructure Development Outlook (WINDO) Plan at Langley Air Force Base, Hampton, in Virginia. We have the following comments concerning the waste issues associated with this project:

Both solid and hazardous waste issues were addressed adequately in the report. However, the report did not include a search of waste-related data bases. The Waste Division staff performed a cursory review of its data files and determined that the facility is under DEQ's Federal Facilities Installation Restoration Program (VA2800005033), a Formerly Used Defense Site (VA9799F1590), and a RCRA small quantity generator of hazardous waste (VAD988222527). The following websites may prove helpful in locating additional information for these identification numbers: http://www.epa.gov/echo/search_by_permit.html or http://www.epa.gov/enviro/html/rcris/rcris_query_java.html. Paul Herman of DEQ's Federal Facilities Program has been contacted for his review of this report and will reply in a separate memo, if he identifies any additional issues.

The report noted that the Explosives Ordnance Detonation (EOD) is to be relocated to another area of the facility. At both this and other locations discussed in the report, any soil that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations. Some of the applicable state laws and regulations are: Virginia Waste Management Act, Code of Virginia Section 10.1-1400 *et seq.*; Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60); Virginia Solid Waste Management Regulations (VSWMR) (9VAC 20-80); Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20-110). Some of the applicable Federal

laws and regulations are: the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901 *et seq.*, and the applicable regulations contained in Title 40 of the Code of Federal Regulations; and the U.S. Department of Transportation Rules for Transportation of Hazardous materials, 49 CFR Part 107.

Also, all structures being demolished/renovated/ removed should be checked for asbestos-containing materials (ACM) and lead-based paint prior to demolition. If ACM or LBP are found, in addition to the federal waste-related regulations mentioned above, State regulations 9VAC 20-80-640 for ACM and 9VAC 20-60-261 for LBP must be followed.

Please note that DEQ encourages all construction projects and facilities to implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. All generation of hazardous wastes should be minimized and handled appropriately.

If you have any questions or need further information, please contact Allen Brockman at (804) 698-4468.

MEMORANDUM


DEPARTMENT OF ENVIRONMENTAL QUALITY - WASTE DIVISION

Federal Facilities Restoration Program

629 E. Main Street P.O. Box 10009 Richmond, Virginia 23240

SUBJECT: Environmental Assessment – Langley Air Force Base – Draft Finding of No Significant Impact/
Finding of No Practicable Alternative – Langley Wing Infrastructure Development Outlook Plan

TO: John Fisher, VCP

FROM: Paul E. Herman, P.E., FFR 

DATE: May 18, 2005

COPIES: Allen Brockman, File

The Langley Air Force Base report entitled *Draft Finding of No Significant Impact, No Practicable Alternative Report for the Langley Wing Infrastructure Development Outlook Plan* dated April 2005 has been reviewed as requested by Allen Brockman, Waste Division Environmental Review Manager. The document presents five projects, three offered alternatives to the proposed action while two offered no other alternatives.

The report correctly identifies the active and closed Environmental Restoration Program (ERP) sites on or adjacent to the proposed construction sites and the alternative construction sites. One additional ERP site that was not identified in the report is Site OT-64, Basewide Groundwater and represents the groundwater component associated with every ERP site on base. Due to the dynamic nature of groundwater, it is possible that contaminated groundwater associated with an ERP site may have migrated beneath an adjacent proposed construction site.

For more information concerning CERCLA obligations at OT-64 and the other active and closed ERP sites that may be impacted by the proposed construction activity, the Federal Facilities Restoration Program recommends the facility contact Mr. John Tice, LAFB Environmental Restoration at (757) 764-1082, prior to initiating any land, sediment, or groundwater disturbing activities.

If you cannot meet the deadline, please notify JOHN FISHER at 804/698-4339 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

REVIEW INSTRUCTIONS:

- A. Please review the document carefully. If the proposal has been reviewed earlier (i.e. if the document is a federal Final EIS or a state supplement), please consider whether your earlier comments have been adequately addressed.
- B. Prepare your agency's comments in a form which would be acceptable for responding directly to a project proponent agency.
- C. Use your agency stationery or the space below for your comments. IF YOU USE THE SPACE BELOW, THE FORM MUST BE SIGNED AND DATED.

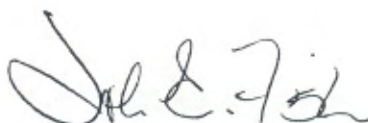
Please return your comments to:

MR. JOHN E. FISHER
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL IMPACT REVIEW
629 EAST MAIN STREET, SIXTH FLOOR
RICHMOND, VA 23219
FAX #804/698-4319

RECEIVED

MAY 19 2005

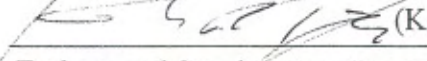
DEQ-Office of Environmental
Impact Review



JOHN E. FISHER
ENVIRONMENTAL PROGRAM PLANNER

COMMENTS

Statements in the project document concerning endangered species were reviewed and compared to available information. No additional comments are necessary in reference to endangered plant and insect species regarding this project.

(signed)  (Keith R. Tignor) (date) May 16, 2005
(title) Endangered Species Coordinator
(agency) VDACS, Office of Plant and Pest Service

Fisher,John

From: Andrew Zadnik [Andrew.Zadnik@dgif.virginia.gov]
Sent: Wednesday, June 08, 2005 12:16 PM
To: Fisher,John
Cc: ProjectReview.Richmond_PO.DGIF@dgif.virginia.gov
Subject: 05-118F_ESSLOG 20253_Langley AFB_Wing Infrastructure OutlookPlan

John,

I don't know what happened to this project. But, I just found it mixed in with more recent projects. Sorry about that. I assume you've already sent in comments. But, just in case you haven't...

We do not anticipate a significant adverse impact upon endangered or threatened wildlife resources under our jurisdiction to occur due to this project. We find this project to be consistent with the Fisheries Section of the VA Coastal Resources Management Program.

Thank you,

Andrew K. Zadnik
Environmental Services Section Biologist
Department of Game and Inland Fisheries
4010 West Broad Street
Richmond, VA 23230

(804) 367-2733

(804) 367-2427 (fax)

If you cannot meet the deadline, please notify JOHN FISHER at 804/698-4339 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

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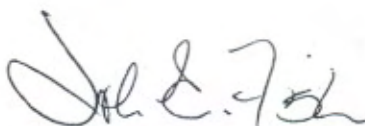
Please return your comments to:

MR. JOHN E. FISHER
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL IMPACT REVIEW
629 EAST MAIN STREET, SIXTH FLOOR
RICHMOND, VA 23219
FAX #804/698-4319

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MAY 23 2005

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JOHN E. FISHER
ENVIRONMENTAL PROGRAM PLANNER

COMMENTS

No comments

(signed) Alan D. Weber (date) 5-12-05
(title) _____
(agency) VDH

If you cannot meet the deadline, please notify JOHN FISHER at 804/698-4339 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

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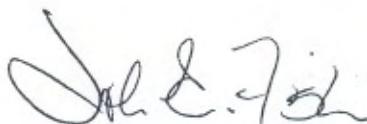
Please return your comments to:

MR. JOHN E. FISHER
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL IMPACT REVIEW
629 EAST MAIN STREET, SIXTH FLOOR
RICHMOND, VA 23219
FAX #804/698-4319

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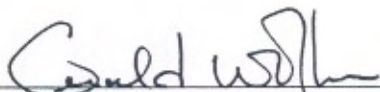


JOHN E. FISHER
ENVIRONMENTAL PROGRAM PLANNER

COMMENTS

NO IMPACT TO THE GEOLOGY OR
MINERAL RESOURCES.

(signed)



(date)

5/12/05

(title)

GEOLOGIST

(agency)

DWME



COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION
1401 EAST BROAD STREET
RICHMOND, 23219-2000

PHILIP A. SHUCET
COMMISSIONER

RECEIVED

MAY 16 2005

DEQ-Office of Environmental
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May 12, 2005

Mr. John E. Fisher
Department of Environmental Quality
Office of Environmental Impact Review
629 East Main St., Sixth Floor
Richmond VA 23219

Re: **Project #05-118F**, Wing Infrastructure Development Outlook (WINDO) Plan, Langley Air Force Base

Dear Mr. Fisher:

Mr. Eric Stringfield, of the Virginia Department of Transportation Hampton Roads District has reviewed the Environmental Assessment and Consistency Determination that you provided relating to the above-mentioned project.

Mr. Stringfield states that preliminary review of the report does not indicate any negative impacts to the transportation system, as there are no transportation improvement projects in the direct area that are in the six (6) year plan or in the 2021 Long Range Plan.

The improvement/construction should note coordination with VDOT. The improvement should not adversely impact the existing or future transportation system, however careful consideration and coordination with the Norfolk Residency is required to insure that all current VDOT standards are met. Otherwise, this office has no objections to the proposed improvements.

Thank you for the opportunity to comment on this project.

Sincerely,

Marlee A. Parker
Environmental Specialist II
VDOT
1401 East Broad Street
Richmond, Virginia 23219
804.786.9683 - O
804.786.7401 - FAX

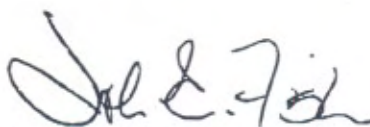
If you cannot meet the deadline, please notify JOHN FISHER at 804/698-4339 prior to the date given. Arrangements will be made to extend the date for your review if possible. An agency will not be considered to have reviewed a document if no comments are received (or contact is made) within the period specified.

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Please return your comments to:

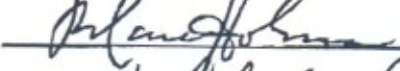
MR. JOHN E. FISHER
DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF ENVIRONMENTAL IMPACT REVIEW
629 EAST MAIN STREET, SIXTH FLOOR
RICHMOND, VA 23219
FAX #804/698-4319



JOHN E. FISHER
ENVIRONMENTAL PROGRAM PLANNER

COMMENTS

The Air Force should consult with DHR directly pursuant to Section 106 of the National Historic Preservation Act. Please remind the applicant of its responsibility under Section 106.

(signed)  (date) 11 MAY 05
(title) Architectural Historian
(agency) DHR

PROJECT # 05-118F

8/98

DHR mail# 2005-0201



JEANNE ZEIDLER, CHAIR • PAUL D. FRAM, VICE CHAIRMAN • JAMES O. MCREYNOLDS, TREASURER

ARTHUR L. COLLINS, EXECUTIVE DIRECTOR/SECRETARY

CHESAPEAKE

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Dalton S. Edge, Mayor
Debbie Rittler, Council Member

FRANKLIN

Mark S. Fetherolf, Council Member
Rowland L. Taylor, City Manager

GLOUCESTER COUNTY

John J. Adams, Sr., Board Member
William H. Whitley, County Administrator

HAMPTON

Randall A. Gilliland, Council Member
Ross A. Kearney, II, Mayor
Vacancy

ISLE OF WIGHT COUNTY

W. Douglas Caskey, County Administrator
Stan D. Clark, Chairman

JAMES CITY COUNTY

Michael J. Brown, Chairman
Sanford B. Wanner, County Administrator

NEWPORT NEWS

Charles C. Allen, Vice Mayor
Joe S. Frank, Mayor
Edgar E. Maroney, City Manager

NORFOLK

Paul D. Fram, Mayor
Donald L. Williams, Council Member
Regina V.K. Williams, City Manager
Barclay C. Winn, Council Member
W. Randy Wright, Council Member

POQUOSON

Charles W. Burgess, Jr., City Manager
Gordon C. Helsel, Jr., Mayor

PORTSMOUTH

Stephen E. Heretick, Council Member
James B. Oliver, Jr., Interim City Manager
Charles B. Whitehurst, Sr., Council Member

SOUTHAMPTON COUNTY

Anita T. Felts, Board Member
Michael W. Johnson, County Administrator

SUFFOLK

R. Steven Herbert, City Manager
Bobby L. Ralph, Mayor

SURRY COUNTY

Terry D. Lewis, County Administrator
Judy S. Lytle, Board Member

VIRGINIA BEACH

Harry E. Diezel, Council Member
Robert M. Dyer, Council Member
Louis R. Jones, Vice Mayor
Meyera E. Oberndorf, Mayor
Peter W. Schmidt, Council Member
James K. Spore, City Manager
James L. Wood, Council Member

WILLIAMSBURG

Jackson C. Tuttle, II, City Manager
Jeanne Zeidler, Mayor

YORK COUNTY

James O. McReynolds, County Administrator
Thomas G. Shepperd, Jr., Chairman

Mr. John E. Fisher
Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, Virginia 23219

Re: Wing Infrastructure Development
Outlook (WINDO) Plan, LAFB
DEQ 05-118F (ENV:GEN)

Dear Mr. Fisher:

Pursuant to your request of April 21, 2005, the staff of the Hampton Roads Planning District Commission has reviewed the Environmental Assessment and Consistency Determination for the proposed Wing Infrastructure Development Outlook (WINDO) Plan for Langley Air Force Base. The Plan consists of five projects, including relocation of a government fuel station, expansion of the Alert Area, construction of a Visitors' Quarters building, relocation of the EOD training range, and construction of a WRM Group and ACCRSS parking area and pedestrian bridge. We have contacted the City of Hampton regarding the project.

Based on this review, we offer the following comments. The information provided indicates that two of five proposed projects will impact wetlands and potential habitat areas to some degree, but does not provide adequate detail necessary to fully assess the effects of the proposed encroachments.

The proposed construction of the WRM Group and ACCRSS parking area appears to be located partially within an area of wetlands and the adjacent buffer. The square footage of the proposed parking area is not given and no details regarding stormwater management on-site are provided. In addition, the map provided does not include adequate information regarding the location and configuration of the proposed parking area. It appears from the map that the area could be reconfigured to reduce the impact to wetlands. We encourage the applicant to provide a more detailed site assessment to determine the impact of this project and to identify possible alternatives that would mitigate that impact.

May 16, 2005
RECEIVED

MAY 18 2005

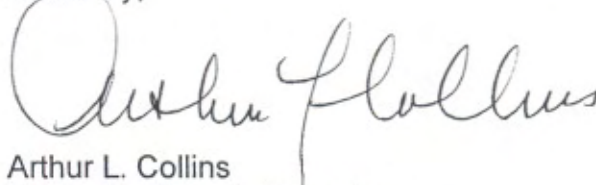
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The EA also identifies endangered and threatened species known to occur in the area of the base, but provides no site-specific assessments. Of particular concern is the impact of noise from the proposed EOD relocation site, which is surrounded by wetlands. The federally listed threatened species bald eagle is known to occur in the northern area of the base and is known to be sensitive to noise, but the most recent information provided is from surveys conducted in 1993 and 1994. We encourage the applicant to provide current site assessment information to allow for a more thorough review of the project's effects on endangered and threatened species.

The City of Hampton has submitted additional comments to you in a separate letter (copy attached). We concur with their comments.

We appreciate the opportunity to review this project. If you have any questions, please do not hesitate to call.

Sincerely,

A handwritten signature in black ink, appearing to read "Arthur L. Collins". The signature is fluid and cursive, with the first letter of each word being capitalized and prominent.

Arthur L. Collins
Executive Director/Secretary

MLJ:fh

Attachment

Copies: Mr. James Freas, HA



City of Hampton

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MAY 13 2005

DEQ-Office of Environmental
Impact Review

MAY 11, 2005

John E. Fisher
Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, VA 23219

**Re: Comment on draft Environmental Assessment -
Wing Infrastructure Development Outlook Plan, Langley Air Force Base, Virginia
Project number - 05-118F**

Dear Mr. Fisher:

Planning staff has received and reviewed the draft Environmental Assessment (EA) for the Wing Infrastructure Development Outlook Plan (WINDO) at Langley Air Force Base (LAFB), Virginia. The EA covers five separate projects, including a fuel station relocation, expansion of the Alert Area, construction of a visitor's quarters building, relocation of the EOD site, and construction of a parking lot and pedestrian bridge.

The planned projects do not appear to impact the site significantly with respect to any cultural, environmental, or community resources. In addition, the projects do not appear to be in conflict with any of the City's current plans or policies.

The City recommends that the Air Force utilize architectural design standards in accordance with the Leadership in Energy and Environmental Design (LEED) Green Building Rating System for the construction of the Visitor's Quarters building. Green design can reduce operating costs and environmental impacts while serving as a model for military bases nationwide.

Please let me know if I can be of further assistance regarding this project (757-728-5233 or jfreas@hampton.gov).

Sincerely,

James Freas
City Planner

May 11, 2005

John E. Fisher
Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street, Sixth Floor
Richmond, VA 23219

**Re: Comment on draft Environmental Assessment -
Wing Infrastructure Development Outlook Plan
Langley Air Force Base, Virginia
Project number – 05-118F**

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Please let me know if I can be of further assistance regarding this project (757-728-5233 or jfreas@hampton.gov).

Sincerely,

James Freas
City Planner

APPENDIX B
PUBLIC NOTIFICATION MATERIALS

**The Department of the Air Force Invites Public Comments
On the Draft Environmental Assessment for the Langley Air Force Base
(AFB) Wing Infrastructure Development Outlook Plan**

Langley AFB has prepared a Draft Environmental Assessment (EA) to analyze the potential impacts of various infrastructure improvement projects at Langley AFB.

The Draft EA assesses the potential environmental consequences resulting from the proposal to construct a new Visitor's Quarters, relocate the Explosive Ordnance Disposal Training Range and the Government Fuel Station; expand the Alert Area and parking area for Air Combat Command's Regional Supply staff. The analysis also assesses alternative sites for the Government Fuel Station, Visitor's Quarters and expansion of the Alert Area.

The Draft EA and a Draft Finding of No Significant Impact/Finding of No Practicable Alternative will be available for review beginning April 18, 2005 at the libraries below. Comments should be submitted by May 17, 2005.

Poquoson Public Library	500 City Hall Avenue
Hampton Public Library	4207 Victoria Blvd
York County Public Library	100 Long Green Blvd
Bateman Library	42 Ash Avenue Langley AFB

To acquire more information, please contact Mr. Matt Goss at the address below. Written comments should be mailed to:

**1 CES/CEVQA
37 Sweeney Boulevard
Langley AFB, VA 23665-2107
ATTN: Matt Goss**

Public Notice Draft EA

The Department of the Air Force invites public comments on the Draft Environmental Assessment for the Langley Air Force Base wing infrastructure development plan

Langley AFB has prepared a Draft Environmental Assessment to analyze the potential impacts of various infrastructure improvement projects at Langley AFB.

The Draft EA assesses the potential environmental consequences resulting from the proposal to construct a new Visitor's Quarters, relocate the Explosive Ordnance Disposal Training Range and the Government Fuel Station; and expand the Alert Area and parking area for Air Combat Command's Regional Supply staff.

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1 CES/CEVQA
ATTN: Matt Goss
37 Sweeney Boulevard
Langley AFB, VA 23665-2107

Base newspaper notice of Draft EA availability

United States Air Force

1st Fighter Wing Public Affairs, 9th Air Force (Air Combat Command)
159 Sweeney Blvd., Suite 100, Langley AFB, VA, 23665-2292
(757) 764-2018
Release No.: 3

APR. 18, 2005

Environmental assessment

LANGLEY AFB, VA- Langley AFB has prepared a Draft Environmental Assessment (EA) to analyze the potential impacts of various infrastructure improvement projects at Langley AFB.

The Draft EA assesses the potential environmental consequences resulting from the proposal to construct a new Visitor's Quarters, relocate the Explosive Ordnance Disposal Training Range and the Government Fuel Station; expand the Alert Area and parking area for Air Combat Command's Regional Supply staff. The analysis also assesses alternative sites for the Government Fuel Station, Visitor's Quarters and expansion of the Alert Area.

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**1 CES/CEVQA
37 Sweeney Blvd.
Langley AFB, VA 23665
ATTN: Matt Goss**

-30-

For additional details call 1st Fighter Wing Public Affairs at 764-2018.

Press release sent to the following media outlets: 97.3 Country; ACC/PAM; ACC/PAV; Air Combat Command/Public Affairs Video (E-mail); Air Force Magazine; Air Force Times; Associated Press; Channel 10; Channel 13;; Channel 3; Cox Communications Daily Press; DP.COM; Eder Chris L TSgt ACC PA/PAVT; E-News, City Page DP, Ch 47; Inside the AF; Lt Col Holcomb; Poquoson Post, Yorktown Crier, Denbigh Gazette, By the Bay; Richmond Times-Dispatch; Soundings; Virginia Gazette; Virginian Pilot; WCMS 100.5 FM; WGNT-27; WHRO; WJLZ; WNOR 98.7FM/AM; WPXV-TV; WRIC TV-8; WTVR TV-6

APPENDIX C
ALERT AREA MEMORANDUM OF AGREEMENT

MEMORANDUM OF AGREEMENT
BETWEEN
LANGLEY AIR FORCE BASE
AND
THE VIRGINIA DEPARTMENT OF HISTORIC RESOURCES
REGARDING
RENOVATION OF FACILITY 1362, THE ALERT HANGAR

WHEREAS, Langley Air Force Base (Langley AFB), located in the City of Hampton, Virginia, proposes to carry out a project (Project) to renovate Facility 1362, an Alert hangar, as part of the Langley AFB Hurricane Isabel recovery program, addressed by the Memorandum of Agreement Between Langley Air Force Base and the Virginia Department of Historic Resources and executed in February 2004, and

WHEREAS, the Project will include the extensive renovation of the entire hangar, to include the renovation of previously renovated interior space, construction of blast walls to separate personnel areas from aircraft parking areas, the replacement of non-original windows, the replacement of the non-original warning system, the replacement of non-original roof material, the replacement of the original barn doors and interior barn door features, and the construction of additional pavement to accommodate the parking of two additional aircraft to meet requirements for Operation NOBLE EAGLE, and

WHEREAS, the removal and replacement of the barn doors and interior barn door features, and the addition of more pavement in the apron area may result in the alteration of character-defining features that may make this building eligible for inclusion on the National Register of Historic Places, and

WHEREAS, Langley AFB has determined that Facility 1362 requires renovation that is necessary to safely meet the requirements of the air sovereignty Alert mission, and the hangar can not sufficiently meet requirements for the arming and disarming of Alert aircraft at Langley AFB in its current condition, and

WHEREAS, Langley AFB has established the Project's Area of Potential Effect (APE) as defined at 36 CFR Part 800.16(d), to be the land parcel on which Facility 1362 is sited, and the adjoining air field, and is depicted on the map included at Appendix A of this Memorandum of Agreement (Agreement), and

WHEREAS, Langley AFB has determined the Project may have an adverse effect on Facility 1362, which is considered eligible for listing in the National Register of Historic Places (National Register) by Langley AFB, and the Virginia Department of Historic Resources

(VDHR), the Virginia State Historic Preservation Office (hereinafter referred to as the SHPO) has concurred in this finding, and

WHEREAS, Langley AFB has consulted with the SHPO, and with the Virginia Council on Indians in accordance with Section 106 of the National Historic Preservation Act, 16 U.S.C. § (NHPA) and its implementing regulations (36 CFR Part 800.6(b)(2)) to address the adverse effect resulting from actions carried out as part of the Project, and

WHEREAS, Langley AFB has provided notification to the Advisory Council on Historic Preservation (Council), pursuant to 36 C.F.R. 800.6(a)(1) and two other parties have been invited and have declined to be signatories for the consultation, to include the Hampton History Museum and the Hampton Historical Society, and

WHEREAS, Langley AFB intends to use the provisions of this Agreement, the completion of the report Historic Evaluation, Building 1362, and the completion of an Environmental Assessment of the Project, to address applicable requirements of Sections 110(a)(1) and 110(b) of the NHPA, Section 106 of the NHPA, and 32 CFR 989 of the National Environmental Protection Act (NEPA), and

NOW, THEREFORE, Langley AFB and the SHPO agree that upon Langley AFB's decision to proceed with the Project, Langley AFB shall ensure the following stipulations are implemented in order to take into account the effect of the Project on historic properties, and these stipulations shall govern the Project and all of its parts until this Agreement expires or is terminated.

Stipulations

The Air Force shall ensure that the following stipulations are implemented.

I. Recordation and Other Mitigation

A. Recordation

1. Facility 1362 shall be documented as follows:

- a. Completion of a final draft of the report, Historic Evaluation of Building 1362, a comprehensive document which includes a description and significance statement for the building and photos of the building's exterior and interior and significant exterior and interior features. The significance statement shall place Facility 1362 within the context of Langley Air Force Base, and within the context of other hangars of its type and design.
- b. Completion of the SHPO's Intensive Level Survey Field Form and accompanying documentation materials, according to current SHPO

standards, and data entry of the survey information into the SHPO's Data Sharing System program.

- c. Submittal of a complete set of full-size drawings of the hangar to the SHPO, and placement of a complete set of full-size drawings in another safe archive, potentially to include the U.S. Air Force Historical Research Agency, and the Headquarters Air Combat Command Historian's Office at Langley AFB.
2. Langley AFB shall provide the draft documentation materials itemized above to the SHPO for review and approval prior to renovation. The SHPO shall have thirty days for review and comment from confirmed receipt of complete information. No response from the SHPO within thirty days of receipt may be considered approval and acceptance of the documentation by Langley AFB.
3. Langley AFB shall provide one set of final original recordation materials for this facility to the SHPO for permanent storage and one set to the Office of the Command Historian, HQ Air Combat Command. Langley AFB shall further offer a copy of the historic evaluation report to the U.S. Air Force Historical Research Agency at Maxwell AFB, Alabama.

B. Other Mitigation

1. Langley AFB shall include Facility 1362 in the Langley AFB Cultural Resources Training Video, currently scheduled for an update, and used for purposes of training personnel about cultural resources management requirements.
2. Langley AFB shall continue to highlight historic structures, including Facility 1362, in its annual Historic Preservation Week activities, including an article focusing on the hangar and its mission. When additional information about plans for Historic Preservation Week is available it shall be provided to the SHPO for review and comment. The SHPO shall have thirty days for review and comment from confirmed receipt of complete information. No response from the SHPO within thirty days of receipt may be considered approval and acceptance of the plans by Langley AFB. Langley AFB shall take the SHPO's comments into account.

II. An executed copy of this agreement will be filed with the Council pursuant to 36 C.F.R. § 800.6(b)(1)(iv).

III. Unexpected Discoveries

A. In the event that a previously unidentified archaeological resource is discovered during ground disturbing activities, all construction work involving subsurface disturbance will

be halted in the area of the resource and in the surrounding area where further subsurface remains can reasonably be expected to occur. The Contractor shall immediately notify Langley AFB, who shall notify the SHPO within 48 hours of discovery. Langley AFB and the SHPO, or an archeologist meeting *The Secretary of Interior's Qualifications Standards*, will inspect the work site and determine the nature and area of the affected archeological resource and assess whether further investigations are warranted. Work may then continue in the project area outside the site area.

B. Langley AFB will consult with the SHPO to determine the National Register eligibility of the previously unidentified resource. The SHPO will respond within two business days of receipt of the documentation. The documentation may be submitted electronically. Potentially eligible historic properties will be evaluated using the National Register criteria in accordance with 36 CFR 800.4(c). If it is determined the resource meets the National Register Criteria (36 CFR Part 60.6), Langley AFB shall ensure compliance with Section 800.13 of the Council's Regulations. The SHPO shall provide comments on any treatment plan submitted within two business days of receipt. Langley AFB shall take into account the SHPO's recommendations regarding National Register eligibility and proposed actions, and then carry out appropriate actions. Langley AFB shall provide the SHPO a report of these actions once they are completed. If the SHPO fails to comment, Langley AFB may assume concurrence and implement the plan. Work in the affected area shall not proceed until both the development and implementation of an appropriate treatment plan; or the determination is made that the located resource is not eligible for inclusion on the National Register.

IV. Dispute Resolution

A. Should any party to this Agreement object in writing to Langley AFB regarding any action carried out or proposed with respect to the undertaking or implementation of this Agreement, Langley AFB shall consult with the objecting party to resolve the objection. If after initiating such consultation Langley AFB determines that the objection cannot be resolved through consultation, Langley AFB shall forward all documentation relevant to the objection to the Council, including Langley AFB's proposed response to the objection. Within thirty days after receipt of all pertinent documentation, the Council shall exercise one of the following options:

1. Advise Langley AFB the Council concurs in Langley AFB's proposed response to the objection, whereupon the agency will respond to the objection accordingly;
2. Provide Langley AFB with recommendations, which Langley AFB shall take into account in reaching a final decision regarding its response to the objection; or
3. Notify Langley AFB the objection will be referred for comment pursuant to 36 CFR 800.7(a)(4), and proceed to refer the objection and comment. Langley AFB shall take the resulting comment into account in accordance with 36 CFR 800.7(c)(4) and Section 110(l) of the NHPA.

B. Should the Council not exercise one of the above options within thirty days after receipt of all pertinent documentation, Langley AFB may assume the Council's concurrence in its proposed response to the objection.

C. Langley AFB shall take into account any Council recommendation or comment provided in accordance with this stipulation with reference only to the subject of the objection; Langley AFB's responsibility to carry out all actions under this Agreement that are not the subjects of the objection shall remain unchanged.

D. At any time during implementation of the measures stipulated in this Agreement, should an objection pertaining to this Agreement or the effect of any individual undertaking on historic properties be raised by a member of the public, Langley AFB shall notify the parties to this Agreement and take the objection into account, consulting with the objector and, should the objector so request, with any of the parties to this Agreement to resolve the objection.

V. Amendment and Termination

A. Any party to this Agreement may request that it be amended, whereupon the parties shall consult in accordance with 36 CFR 800.13 to consider such an amendment.

B. If Langley AFB determines it cannot implement the terms of this Agreement, or if the SHPO or the Council determines the Agreement is not being properly implemented, Langley AFB, the SHPO or the Council may propose to the other parties that it be terminated.

C. Termination shall include the submission of any outstanding documentation on any work done up to and including the date of termination.

D. A party proposing to terminate this Agreement shall so notify all parties to the Agreement, explaining the reasons for termination and affording them at least thirty days to consult and seek alternatives to termination. The parties shall then consult.

E. Should such consultation fail and the Agreement be terminated, Langley AFB shall comply with 36 CFR 800.3 through 800.6 with regard to individual undertakings covered by this Agreement

VI. Duration of the Agreement

This Agreement will continue in full force and effect until five years after the date of the last signature. At any time in the sixth-month period prior to such date, Langley AFB may request the SHPO to consider an extension or modification of this Agreement. No extension or modification will be effective unless all parties to the Agreement have agreed with it in writing.

VII. Execution

Execution of this Agreement by Langley AFB and the SHPO, and its submission to the Advisory Council on Historic Preservation (Council) in accordance with 36 CFR 800.6(b)(1)(iv),

shall, pursuant to 36 CFR 800.6(c), be considered to be an agreement with the Council for the purposes of Section 110(l) of NHPA. Execution and submission of this Agreement, and implementation of its terms, evidence that Langley AFB has afforded the Council an opportunity to comment on the Project and its effect on historic properties, and that Langley AFB has taken into account the effects of the Project on historic properties.

LANGLEY AIR FORCE BASE

By: Frank Gorenc

Date: 8 09 2004

FRANK GORENC, Colonel, USAF

Commander, 1st Fighter Wing

VIRGINIA DEPARTMENT OF HISTORIC RESOURCES

By: Kathleen S. Kilpatrick

Date: 11/14/04

KATHLEEN S. KILPATRICK

Director and State Historic Preservation Officer

APPENDIX D
FEDERAL AGENCY COASTAL ZONE
MANAGEMENT ACT (CZMA)
CONSISTENCY DETERMINATION

APPENDIX D: FEDERAL AGENCY COASTAL ZONE MANAGEMENT ACT (CZMA) CONSISTENCY DETERMINATION

INTRODUCTION

This document provides the Commonwealth of Virginia with the U.S. Air Force's Consistency Determination under CZMA Section 307 and 15 C.F.R. Part 930 sub-part C. The information in this Consistency Determination is provided pursuant to 15 C.F.R. Section 930.39.

Pursuant to Section 307 of the Coastal Zone Management Act, 16 U.S.C. § 1456, as amended, its implementing regulations at 15 C.F.R. Part 930, this is a Federal Consistency Determination for activities described within the Langley AFB Wing Infrastructure Development Outlook (WINDO) Plan Environmental Assessment (Chapter 2.0 of the document).

Proposed Federal Agency Action

The proposed action of the EA is to upgrade facilities and services associated within the WINDO Plan at Langley AFB.

The U.S. Air Force has evaluated the proposed action and alternatives for potential effects to the land or water uses or natural resources of the Commonwealth's coastal zone within the context of the statutes listed in the Virginia Coastal Resources Management Program (below).

Federal Consistency Review

Statutes addressed as part of the Virginia Coastal Resources Management Program consistency review and considered in the analysis of the proposed actions are discussed in the following table.

<i>Statute</i>	<i>Scope</i>	<i>Consistency</i>
<p>Fisheries Management</p> <p>Virginia Administrative Code 28.2-200 to 28.2-713 (Virginia Marine Resources Commission) and 29.1-100 to 29.1-570 (Department of Game and Inland Fisheries)</p> <p>State Tributyltin (TBT) Program. VAC 3.1-249.59 to 3.1-249.62</p>	<p>Stresses the conservation and enhancement of finfish and shellfish resources and the promotion of commercial and recreational fisheries to maximize food production and recreational opportunities.</p>	<p>Fisheries would not be affected by the proposed action or alternatives</p>
<p>Subaqueous Lands Management</p> <p>Virginia Administrative Code Section 28.2-1200 to 28.2-1213</p>	<p>Establishes the conditions for granting or denying permits to use state-owned bottomlands based on considerations of potential effects on marine and fisheries resources, wetlands, adjacent or nearby properties, anticipated public and private benefits and water quality standards established by the Virginia Department of Environmental Quality.</p>	<p>No aspects of the proposed action or alternatives occur in state waters. There will be no dredge and fill operations. The proposed action or alternatives would not involve the use of state submerged lands</p>

<i>Statute</i>	<i>Scope</i>	<i>Consistency</i>
<p>Wetlands Management</p> <p>The tidal wetlands program is administered by the Virginia Marine Resources Commission; Virginia Administrative Code 28.2-1301 to 28.2-1320.</p> <p>The Virginia Water Protection Permit program administered by VDEQ includes protection of wetlands – both tidal and non-tidal; Virginia Administrative Code 62.1-44.15.5 and Water Quality Certification pursuant to Section 401 of the Clean Water Act.</p>	<p>Preserves tidal wetlands, prevent their Destruction, and accommodate economic development in a manner consistent with wetlands preservation. Also, establishes a Water Quality Certification program consistent with Section 401 of the Clean Water Act.</p>	<p>The proposed action or alternatives would not conflict with the wetlands management program associated with the Virginia Coastal Zone Management Program. There would be no significant impacts to wetlands from the implementation of the proposed action since the majority of development would be in areas not delineated as wetlands. Standard construction and demolition practices would be applied to control sedimentation and erosion during construction, renovation, and demolition, thereby avoiding secondary effects to any nearby wetlands or freshwater aquatic communities.</p>
<p>Dunes Management</p> <p>Virginia Administrative Code 28.2-1400 through 28.2-1420 (Marine Resources Commission)</p>	<p>Provides for protection of primary dunes as contained in the Coastal Primary Sand Dune Protection Act</p>	<p>The proposed action and alternatives will not adversely affect beach and shore management, nor impact any primary dunes as defined by the Coastal Primary Sand Dune Act. There are no sand-covered beaches or sand dunes in the vicinity of this project.</p>

<i>Statute</i>	<i>Scope</i>	<i>Consistency</i>
Non-point Source Pollution Control Virginia Administrative Code Sections 10.1-560 et seq (Department of Conservation and Recreation)	Virginia's Erosion and Sediment Control Law requires soil-disturbing projects to be designed to reduce soil erosion and to decrease inputs of chemical nutrients and sediments to the Chesapeake Bay, its tributaries, and other rivers and waters of the Commonwealth. This program is administered by the Department of Conservation and Recreation (Virginia Administrative Code Section 10.1-560 et seq).	The proposed action and alternatives would result in minor soil erosion and increases in turbidity from soil erosion. Best management practices for preventing and controlling erosion would be necessary and are described in Chapter 2.1.6 of the document.
Point Source Pollution Control Virginia Administrative Code 62.1- 44.15 (State Water Control Board)	The point source program is administered by the State Water Control Board pursuant to Virginia Administrative Code Section 62.1- 44.15. Point source pollution control is accomplished through the implementation of the National Pollutant Discharge Elimination System (NPDES) permit program established pursuant to Section 402 of the federal Clean Water Act and administered in Virginia as the VPDES permit program.	No point source discharges into surface water or effects to public drinking water supplies would occur from the proposed action and the alternatives.
Shoreline Sanitation Virginia Administrative Code Sections 32.1-164 through 32.1-165 (Virginia Department of Health)	Regulates the installation of septic tanks, sets standards concerning soil types suitable for septic tanks, and specifies minimum distances for placement from streams, rivers and other State Waters	Installation of septic tank systems are not contained in this proposal. All sanitary sewage will be routed to an on-base central sewage collection system and treated at the Hampton Roads Sanitation District's regional wastewater treatment facility.

<i>Statute</i>	<i>Scope</i>	<i>Consistency</i>
Air Pollution Control Virginia Administrative Code Section 10-1.1300 to 10-1.1320 (State Air Pollution Control Board)	Implements the Federal Clean Air Act to provide the legally enforceable State Implementation Plan for the attainment of the National Ambient Air Quality Standards.	The proposed action and the alternatives would not result in significant air emissions.
Coastal Lands Management Virginia Administrative Code Sections 10.1-2100 to 10.1-2114 and Virginia Administrative Code 10-20-10 et seq. (Chesapeake Bay Local Assistance Department and 84 localities in Tidewater Virginia)	A state-local cooperative program pursuant to the Chesapeake Bay Preservation Act and Chesapeake Bay Preservation and Management Regulations to regulate activities in the Chesapeake Bay Resource Management Areas The main goal of this program is protect and restore coastal resources, habitats, and species of the Commonwealth. These include, but are not limited to, wetlands, subaqueous lands and vegetation, sand dune systems, barrier islands, underwater or maritime cultural resources, riparian forested buffers, and endangered or threatened species	The proposed action and alternatives, which occurs primarily on federal property, would, as a matter of comity, be conducted as much as possible so as to be consistent with the requirements of the Chesapeake Bay Preservation Act and Management Regulations.

